AUGUST • 35c
1959

AMERICAN

Cinematographer

SERVING ALL FIELDS OF MOTION PICTURE PRODUCTION

The Magazine of Motion Picture Photography

Lean Shamray uses variable color control in set lighting to enhance pace and mood of "Porgy and Bess."

. . . page 476

Joseph Brun used wide-angle lenses almost entirely in photographing "Odds Against Tomorrow."

. . . page 478

Lee Gormes accamplishes startling, sharp photography with Panavision 65 camera for "The Big Fishermon."

. . . page 480

PLUS:

- Photographing "The Nun's Story"
- Directional Continuity in Cinematography
- Product Report on the Perfectone Recorder

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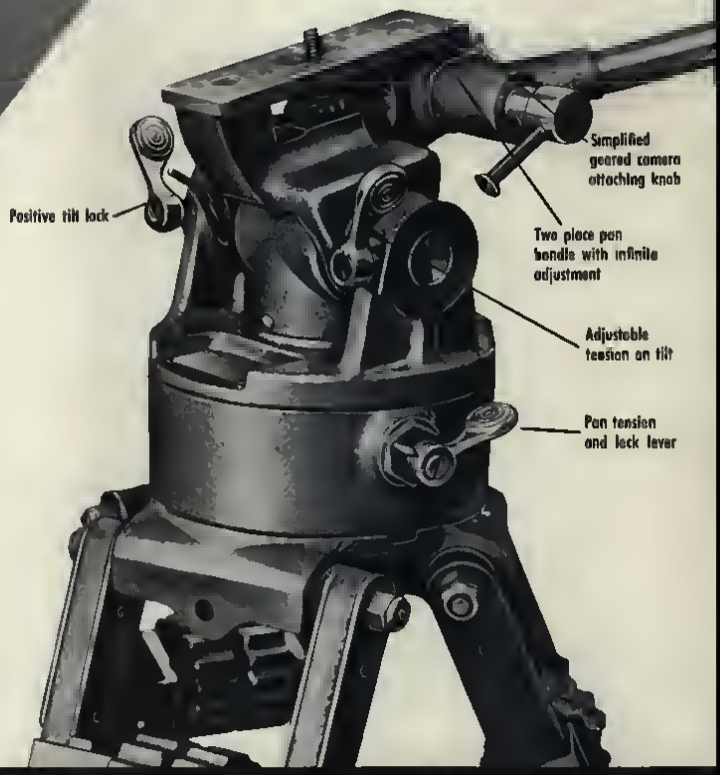
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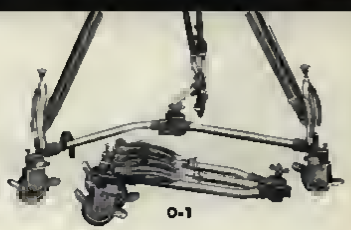

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INDUSTRY NEWS

News briefs of industry activities, products and progress

Actor-producer Jerry Lewis. last mon h on the test stage at Paramount Studios in Hollywood. made extensive tests to prove feasibility of using three-camera technique in filming his up coming "Like Father, Like Son," Lewis believes that he can save up to $250,-000 on this production by shooting each scene with three cameras running simultaneously—one for the long shot. one for medium. and the third for closeups—the system presently used in television for recording most of the hig dramatic live shows

• • •

The motion picture industry last month was cautioned to re-consider the past contributions as well as the future potentials of its technicians and engineers by Dr. John G. Frayne, retiring engineering manager of Westrex Corp.

At a testimonial luncheon tendered him by members of the motion picture engineering fraternity, Frayne declared the motion picture producers now feel that the industry can dispense with the services of technicians and engineers who have contributed invaluable services in improving the quality of film production during the past decade. "It is now more important than ever that engineering progress be encouraged," Frayne said.

Frayne. a past president of the Society of Motion Picture and Television Engineers, has been the recipient of many industry honors during the past 30 years for his engineering achievements.

• • •

VTR Mobile Productions, Inc., will have a second mobile video tape recording unit available in Hollywood on a rental basis about August 1st.

Unit will comprise two motor-driven vans—one housing two video tape recorders and the other, the camera chains and control and mixing console

Rental charges will range between $1,000 and $2,000 per day. Rental will include equipment only; user must provide own personnel.

• • •

Videotape, like a rumbling but inactive volcano, is being avidly watched by the Hollywood motion picture industry for signs of a definite trend. Questions that have puzzled many outside the realm of actual videotape operations. but who nevertheless are vitally interested in its possibilities and future progress, are being answered in a series of comprehensive articles on the subject appearing in *Daily Variety*, Hollywood industry trade paper, and written by Bob Chandler.

The picture recorded on tape. Chandler points out, is subject to all the limitations inherent in television.

There are two methods of recording action out of doors with VTR, he points out—by using a mobile unit or using a microwave relay setup whereby the camera signals are beamed to a TV station or network control room, where they are fed into the tape recorder.

Outdoor lighting is a problem for VTR, too, it was pointed out "Television cameras have far greater light tolerance than film cameras," Chandler states, "enabling them to shoot much more in natural light and with far less lighting than is required for motion pictures But the very tolerance makes the lighting requirements far more stringent, and the mobility of the multi-camera techniques employed by live television creates many more lighting problems. The lighting situation is especially difficult outdoors, where different camera angles can create startling differences in light levels."

• • •

Two one-minute TV commercials in color photographed for Chevrolet by Karl Struss. A.S.C., have won the Grand Prix award at Cannes. According to Struss, it is the first time this award has been given a TV commercial filmed in color. ■

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AMERICAN
Cinematographer

August, 1959 • Vol. 40, No. 8

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ON THE COVER

The Todd-AO camera under direction of Leon Shamroy, photographs scene on location for Samuel Goldwyn's Porgy and Bess. Joseph Brun's camera crew is shown filming a scene on location in New York for Odds Against Tomorrow. Lee Garmes (left, lower photo) discusses camera setup for a scene for The Big Fisherman with (L to R) Howard Keel, director Frank Borzage, and camera operator Eddie Garvin

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The director asked for an atmosphere of increasing menace and a climax of catastrophy. Story by the photographer, Joseph Brun, A.S.C.

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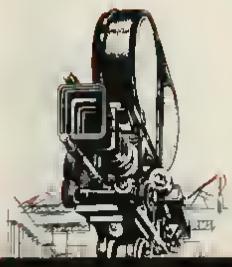

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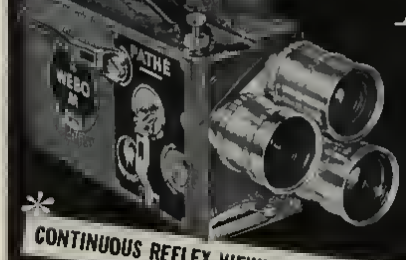

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BOOKLETS CATALOGS and BROCHURES

Wide-screen Booklet

"Wide Screen Motion Pictures" is title of new booklet recently published by the Society of Motion Picture and Television Engineers It is revised edition of booklet first published in September 1955. It includes up-to-date and detailed information on CinemaScope, Cinemiracle, Cinerama, MGM Camera 65, Panavision 65, Superscope, Technirama, Todd-AO, Vista-Vision and others Included are specifications for camera aperture, projector aperture, aspect ratio, direction and rate of film travel, soundtrack information, etc, for each system

A separate section explains the optical principles used in anamorphic systems Copies are 25¢ each Write to SMPTE headquarters, 55 West 42nd St, New York 36, N. Y.

Film Storage Data

"Fire Effects and Fire Control in Nitrocellulose Photographic-film Storage," is title of recent publication of National Bureau of Standards.

The 20-page booklets reports the results of a comprehensive research on the fire hazards of nitrocellulose motion picture film. Although this type of motion picture film is no longer manufactured, large quantities containing important historical or record information have accumulated for many years The relative effectiveness of various safety devices in minimizing fire loss to film and danger to surrounding property are described.

Price per copy is 20 cents Write to Government Printing Office, Washington 25, D. C.

Kodak Publications Catalog

A handy 16-page guide to Eastman Kodak Company photographic publications has been revised to include recently-added titles.

"Kodak Books And Guides" (L-8) lists titles of publications on general and specific photographic subjects, gives brief descriptions of their contents, number of pages, and list price of each. Copies are available free from Sales Service Div., Eastman Kodak Co., Rochester 4, N. Y.

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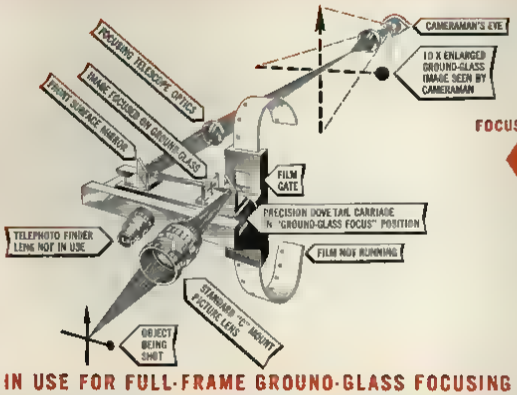
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IMAGE FOCUSED ON GROUND-GLASS
FRONT-SURFACE MIRROR
FILM GATE
PRECISION DOVE TAIL CARRIAGE IN "GROUND-GLASS FOCUS" POSITION
TELEPHOTO FINDER LENS NOT IN USE
FILM NOT RUNNING
STANDARD "C" MOUNT PICTURE LENS
OBJECT BEING SHOT

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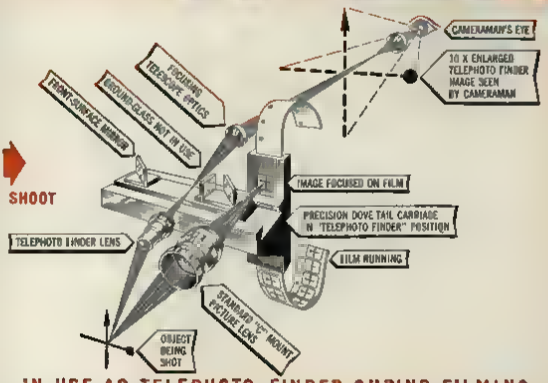
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GROUND-GLASS NOT IN USE
FRONT-SURFACE MIRROR
IMAGE FOCUSED ON FILM
PRECISION DOVE TAIL CARRIAGE IN "TELEPHOTO FINDER" POSITION
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PHOTOGRAPHIC ASSIGNMENTS

WHAT THE INDUSTRY'S CAMERAMEN WERE SHOOTING LAST MONTH

ASTERISKS INDICATE TELEVISION FILMS

ALLIED ARTISTS

GILBERT WARRENTON, ASC, "Atomic Submarine" (Gorham Prod.) with Arthur Franz and Dick Foran Spencer G Bennet, director

AMCO STUDIOS

GLEN MACWILLIAMS, ASC, "Police Station"* (Sandy Howard Prods.) Sandy Howard, director.

AMERICAN NATIONAL

BOB HOFFMAN, "Bold Venture"* with Dane Clark; "Challenge"* with George Nader (Ziv TV) Andrew Marton, director

MONROE ASKINS, RICHARD RAWLINS, "Lock up"* (Ziv-TV) with MacDonald Carey

WILLIAM WHITLEY, ASC, "Space"* (Ziv-TV) with Bill Lundigan.

CALIFORNIA STUDIOS

VERNON LEWIS, "Navy Industrial Film"* (Roland Reed Prods Shooting in NY) Arthur Pearson, director

HOWARD SCHWARTZ, National Realtor Board Film* (Roland Reed Prods.) Arthur Pearson, director

CASCADE PICTURES

ELWOOD BREDELL, ASC, Commercials*

COLUMBIA

GERT ANDERSON, ASC, "Donna Reed Show"* (Screen Gems) with Donna Reed Oscar Rudolph, director.

OSWALD MORRIS, "Our Man in Havana" (Kingmead Prods.; C'Scope, shooting in Havana) with Alec Guinness and Maureen O'Hara. Carol Reed, director.

GEORGES PERINAL, "Once More, with Feeling" (Stanley Donen Films, shooting in Paris) with Yul Bryoner and Kay Kendall Stanley Donen, director.

CHARLES LAWTON, ASC, "Comanche Station" (Scott-Brown Prods., shooting in Lone Pine) with Randolph Scott and Nancy Gates Budd Boetticher, director.

JAMES WONG HOWE, ASC, "The Franz Liszt Story" (Goetz Pict.; shooting in Vienna) with Dick Bogarde and Capucine. George Cukor, director

FRED GATELY, ASC, "Father Knows Best"* (Screen Gems) with Robert Young and Jane Wyatt Peter Tewksbury, director

IRVING LIPPMAN, "Tightrope"* (Screen Gems) with Michael Connors.

FRED JACKMAN, JR., "Alcoa Geodyear Theatre"* (Screen Gems) Walter Grauman, director;

JACK HILDYARD, "Suddenly, Last Summer" (Sam Spiegel Prods., shooting in London) with Elizabeth Taylor and Montgomery Clift. Joseph Mankiewicz, director

HENRY FREULICH, ASC, "Dennis the Menace"* (Screen Gems with Gloria Henry & Herbert Anderson. Wm. Russell, director. Commercials* (Screen Gems).

JACK ETRA, "Stakeout"* (Screen Gems, shooting in Fla.) with Walter Mathau. Harmon Jones, director.

BURNETT GUFFEY, ASC, "Mountain Road" (WideScreen; shooting in Ariz.) with James Stewart Daniel Mann, director

DISNEY STUDIOS

WILLIAM SNYDER, ASC, "Toby Tyler (Technicolor) with Kevin Corcoran and Henry Calvin Charles Barton, director.

PAUL BEESON, "Kidnapped" (Buena Vista release, Technicolor; shooting in England & Scotland) with James MacArthur and Peter Finch. Robert Stevenson, director.

LUCIEN BALLARD, ASC, "Elfeco Baca"* with Robert Loggins and Robert Simon. George Sherman, director

WALTER CASTLE, ASC, "The Little League"* Walter Beaudine, director

FOX WESTERN AVENUE

JAMES VAN TREES, ASC, "The Many Loves of Dobie Gillis"* with Dwayne Hickman.

FRED GATELY, ASC, Commercials* (Four Star Prods.)

CHARLES VAN ENGER, ASC, "Man Without a Gun"* with Rex Reason and Mort Mills.

LLOYD AHERN, ASC, "How to Marry a Millionaire"* with Barbara Eden, Merry Anders and Lisa Gaye Danny Dare, director.

GENERAL SERVICE

FRANK PHILLIPS, "Border Patrol"* (Gallu Prods.) with Richard Webb. Sam Gallu, director

INDEPENDENT

BORIS KAUFMAN, ASC, "The Fugitive Kind" (Jurow-Shepherd Prod. for UA, shooting in NY) with Marlon Brando and Anna Magnani. Sidney Lumet, director.

JAMES SEELEY, ASC, Missile Test Project RCA Atlantic Missile Range, Cape Canaveral Fla.

MORRIS HARTZBAND, "Brenner"* (Keneo; shooting in N.Y.) with Ed Binns and James Broderick. Gerald Mayer and Herman Hoffman, directors.

KEYWEST STUDIOS

WALTER STRENGE, ASC, Series of religious pictures (Family Films) William Claxton, director

LINKLETTER PLAYHOUSE

ALAN STENSVOLD, ASC, "People Are Funny"* Herb Atkins, director

METRO-GOLDWYN-MAYER

EDWARD SCAIFE, "The House of the Seven Hawks" (David E Rose Prod., C'Scope & Metrocolor, shooting in London) with Robert Taylor and Nicole Maurey Richard Thorpe, director.

GEORGE CLEMENS, ASC, "Twilight Zone"* (CBS)

JOHN NICHOLAUS, "Rawhide"* (CBS-TV) with Eric Fleming and Clint Eastwood

WILLIAM MARGULIES, "The Lawless Years"* (Jack Chertok Prods.) with James Gregory and Robert Karnes.

JOSEPH RUTTENBERG, ASC, "The Wreck of the Mary Deare" (C'Scope & Color) with Gary Cooper and Charlton Heston. Michael Anderson, director.

MILTON KRASNER, ASC, "Home from the Hill" (C'Scope & Color) with Robert Mitchum and Eleanor Parker. Vincente Minelli, director.

WILLIAM DANIELS, ASC, "Never so Few" (C'Scope & Color) with Frank Sinatra and Gina Lollobrigida. John Sturges, director.

HAL MOHR, ASC, "The Last Voyage" (Color, shooting in Japan) with Robert Stack and Dorothy Malone. Andrew L. Stone, director.

PAUL VOGEL, ASC, "The Time Machine" (Galaxy Prods.) with Rod Taylor and Alan Young George Pal, director.

N.B.C.

ALAN STENSVOLD, ASC, "You Bet Your Life"* with Groucho Marx. Bob Dwan and Bernie Smith, directors

PARAMOUNT

LOYAL GRIGGS, ASC, "A Visit to a Small Planet" (Hal Wallis Prod.) with Jerry Lewis and Earl Hollman. Norman Taurog, director.

DANIEL FAPP, ASC, "Li'l Abner" (Technicolor) with Peter Palmer, Stubby Kaye and Julie Newmar Melvin Frank, director.

ALDO TONTI, "Savage Innocents" (Magic Films, shooting in Canada) with Anthony Quinn and Yoko Tani Nicholas Ray, director.

PARAMOUNT SUNSET

STANLEY CORTEZ, ASC, "Women Confidential" (Imperial Picts.) with Mamie Van Doren and Richard Coogan. Edw L. Cahn, director.

REVUE STUDIOS

MACK STENGLER, ASC, "Leave it to Beaver"* (Gomalco Prods.) with Barbara Billingsley and Hugh Beaumont. Norman Tokar, director.

BENJ. KLINE, ASC, "Wagon Train"* with Ward Bond (Revue Prods.)

JOHN WARREN, ASC, RAY RENNAHAN, ASC, "Whispering Smith"* (Revue Prods.)

JOHN RUSSELL, ASC, LIONEL LINDON, ASC, "Riverboat"* (Revue Prods.)

ELLIS THACKERY, ASC, "Wells Fargo"* (Overland Prods.) with Dale Robertson David Rich, director.

LIONEL LINDON, ASC, WILLIAM SICKNER, ASC, "General Electric Theatre"* (Revue Prods.)

RAY CORY, ASC, JOHN WARREN ASC, "Markham"* (Revue Prods.) with Ray Milland.

Continued on Page 507

for

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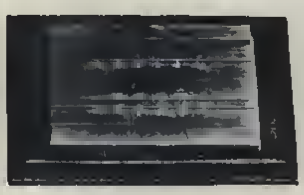

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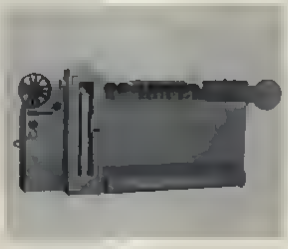

16mm Film Processor

Filmline Corp., Milford, Conn., announces a new daylight-operation film processor for 16mm reversal, negative and positive film. It was designed especially to meet the fast processing needs of TV stations, race tracks, and film labs specializing in quick processing and quality results.

Semi-portable, easily installed and maintained, the Filmline Model RT-S has a dry-to-dry time of less than 3 minutes for reversal emulsions, when operating at 85 fpm at a temperature of 90° F.

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Data sheet is available. List price is $6,450, F.O.B., Milford, Conn.

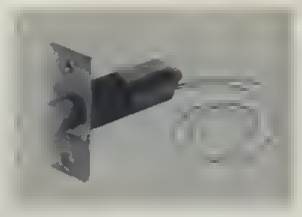
Wide-Angle Lens Adapter

A special mount for the Angenieux 18.5mm f/2.2 wide-angle lens that permits it to be used on 35mm Arriflex cameras, is announced by Gordon Enterprises, 5362 Cahuenga Blvd., North Hollywood, Calif.

Power Amplifier-Speaker

Hallen Electronics, 332 No. La Brea Ave., Los Angeles 36, Calif., announces production of a new transistorized power amplifier-speaker combination for use with most tape recorders.

The 12-watt amplifier, completely transistorized, is acoustically flat and free from dips and peaks in frequency response from 40 to 12,000 cps. Both volume and equalization controls are provided on a recessed panel and a jack provides for use of an external speaker.



Electric Lock

Challenger Lock Co., 2349 West La Palma Ave., Anaheim, Calif., announces a new electrically-operated lock that has many possible applications in the motion picture, sound, and film laboratory fields. Lock is designed for use where two opposing doors are employed that should not be opened at the same time. With the Challenger lock, opening either door automatically locks the other. Further technical details may be had by writing company.

Continued on Page 508

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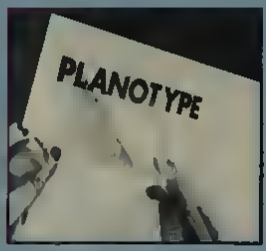

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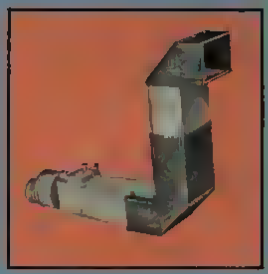

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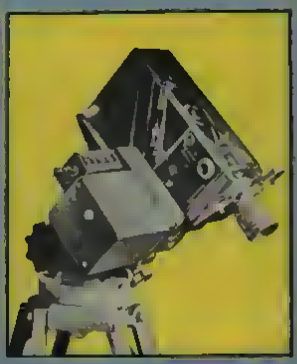

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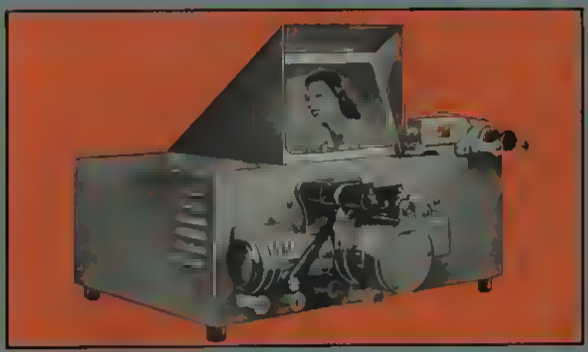

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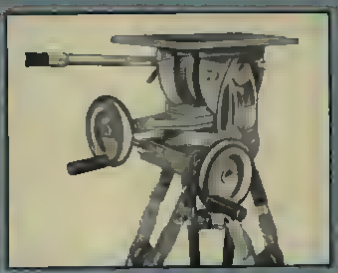

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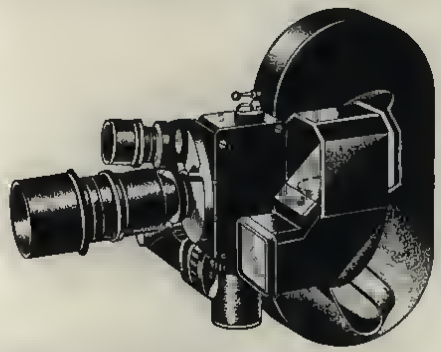

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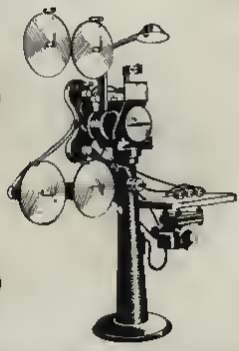

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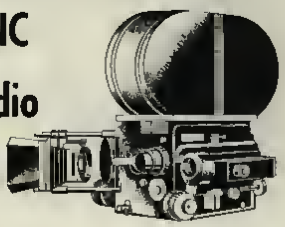

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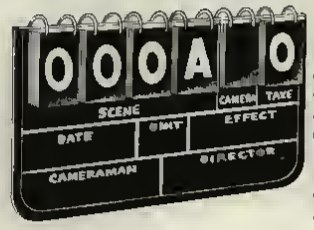

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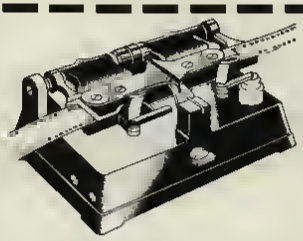

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June 1959 issue
AMERICAN

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THE MAGAZINE OF MOTION PICTURE PHOTOGRAPHY

featured the ARRIFLEX 16 in a four page editorial report and headlined it...

"The Arriflex 16, because of its versatility, ruggedness and reliability has become the most popular portable professional motion picture camera in America today"

(illustrations and captions from the same report)

THE ARRIFLEX 16mm camera's great popularity is due to its many practical features such as through-the lens viewing while filming, divergent 3-lens turret, registration pin in film gate, automatic buckle switch and variable speed electric motor

REAR VIEW, showing eye piece of direct-viewing finder, tachometer, footage and frame counters, and variable speed control for the motor.

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ARRI SOUND BLIMP plus 400-ft magazine and sync motor converts the Arriflex 16 to an efficient production camera for sound stage and location filming.

SIDE VIEW of blimp with doors open. Three separate doors are provided for easy access to interior: one on top for mounting 400-ft magazines; another in front for access to lenses and turret, and on the side, for inserting the camera

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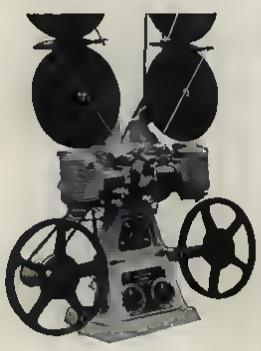

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TECHNICAL QUESTIONS & ANSWERS

Conducted by Walter Strenge, A.S.C.

QUESTIONS relating to cinematography or other phases of film production are invited from readers and will be answered by letter by Walter Strenge or by other qualified members of the American Society of Cinematographers. Questions and answers considered of general interest will appear in this column.—*Ed.*

Q I plan to film a number of stage shows on 16mm film where the action will be continuous for periods of 30 minutes. Can satisfactory picture and sound results be obtained by using one 1200-ft. 16mm camera (single system) for recording the sound track and the master long shot scenes, and a second camera operating in sync with the first to record medium, closeup and angle shots? If so, will it then be possible to "raise" the track from the single-system camera negative and obtain a separate sound track that could be used same as a double-system track, thus making it possible to intercut and edit the No. 1 and No. 2 camera films in the usual double-system manner? Would this result in a satisfactory composite print?—O. E., Florala, Alabama.

Answer: Where you have two negatives that require intercutting, a separate sound negative may be obtained by first making a master positive print from which an optical sound dupe negative may be made for double-system printing.

This sound dupe negative should give you fairly satisfactory composite sound print quality if the original single-system camera sound negative is of good quality.

To obtain the best sound quality when intercutting two single-system negatives, a sound print should first be made from one of the negatives and a re-recorded sound transfer to an optical sound negative then made. This can include any necessary sound frequency and volume correction and should give better sound quality on the final composite print than would be obtained by the optical dupe method.—*William Gephart, A.S.C. Associate.*

Q I recently purchased a lens on which the footage and f/stop marks were almost entirely obliterated. How can I (1) determine the focal length of this lens, (2) what size area it will cover, and (3) the speed of the lens?—A. M. J., Fresno, Calif.

Answer: A simple way to determine the focal length of the lens and also its coverage is to mount it in front of a piece of negative film, with ground glass focusing available (as with a camera). Take a picture with the lens, preferably of a building or some other architectural object whose dimensions are known or can be determined.

The distance from the nodal point of the lens to the object should also be carefully determined. The focal length can then be computed, containing only the error due to the necessary rack-out. If this rack-out is computed for the focal length indicated and subtracted from the first computed focal length, a fairly accurate focal length will result

The coverage, of course, can be determined from an inspection of the developed film. The film area used should be large enough to exceed the coverage of the lens, if extreme coverage of latter is desired.

The speed of the lens can be most easily determined photometrically by using an ordinary photometer in the image plane and comparing the reading obtained with those obtained from another lens of the same focal length, under the same conditions. Photo Research Corp., Los Angeles, and Camera Equipment Co., Inc., New York City, also can determine fairly accurately the T-Stop rating of the lens by photometric methods. — *Winton Hoch, A.S.C.*

Q I have a Norwood exposure meter and would like to know how to use it to determine exposure where there is backlight in the scene. — C. M., Neuilly, France.

Continued on Page 510

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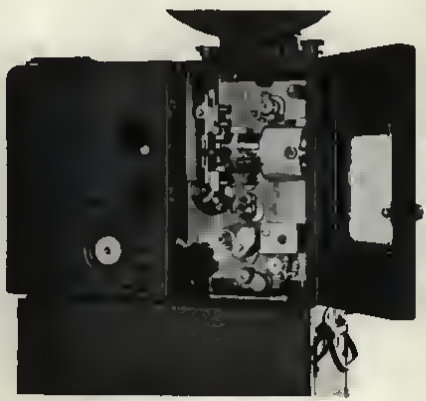

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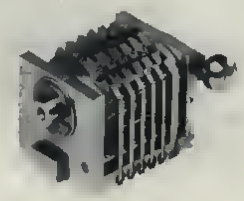

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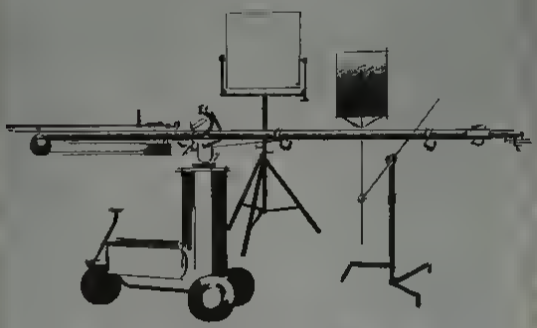

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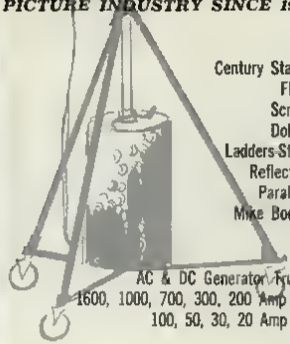

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PHOTOGRAPHING THE PICNIC PARADE Shamroy's camera crew trains the Todd-AO camera on residents of Catfish Row in their Sunday finery as they start march to boat that will take them to picnic grounds. Exterior set was erected on sound stage, required every illumination source at the studio to light.

"PORGY AN PHOTOGRAPHI

Leon Shamray's extraordina mood lighting and imaginat photographic treatment "painting with light" at its be

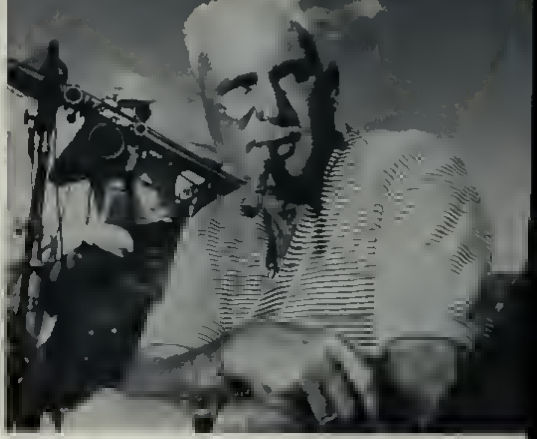
By ARTHUR E. GAV

IT ISN'T OFTEN THAT A motion picture comes along that affords the cameraman opportunity to embellish it pictorially in a manner calculated to heighten audience emotional response. Most of today's productions call for reasonably straightforward photography, offering little or no opportunity for imaginative pictorial treatment except, perhaps, for certain sequences that depend additionally on momentarily pointing up a mood through stylized lighting, a unique camera treatment or both.

As a stage production, "Porgy and Bess" probably has seen as many variations in presentation and treatment as any of the "immortals" of the footlights. It was logical, therefore, that Samuel Goldwyn and the great staff of creative artists he gathered together to put "Porgy and Bess" on the screen should seek to excel all previous presentations of this world-famous musical.

Despite extensive pre-production planning and the superb production design, art direction and costuming, Goldwyn's "Porgy and Bess" could never have become the great motion picture that it is visually without the imaginative lighting and photography that causes this fine melodic masterpiece to unfold on the screen as a vast canvas on which the sets, costumes and the players themselves in a sort of visual enchantment stir an emotional chord such as art devotees experience when looking upon a masterpiece of Ruebens, Rembrandt, or Gauguin.

There probably is only one cinematographer who could achieve this, and Samuel Goldwyn knew it when he sought out Leon Shamroy, A.S.C., to photograph "Porgy and Bess" in Todd-AO and Eastman Color. It was Shamroy who attained new heights in photographic achievement in filming the memorable "South Pacific" in Todd-AO and color—



THREE-TIME "OSCAR" WINNER Leon Shamroy, ASC, photographed Samuel Goldwyn's "Porgy and Bess." Unlike with his photography of "South Pacific," Shamroy used no unusual color filters before the camera lens in photographing "Porgy and Bess."

BESS" — A MASTERPIECE

the same Shamroy with the rough exterior and a sensitive artist's feel for emotional pictorialism who for more than thirty years has been giving each new picture assignment a different and highly imaginative photographic treatment. He is one of the top four Academy Award winners among cameramen, with three "Oscars," two Look Awards, and eleven "Oscar" nominations to his credit.

Surprising as it may seem, Shamroy had no preconceived ideas about how he was going to photograph the picture, right up to the starting date. "Porgy and Bess" was virtually a blank canvas when he commenced the initial camera work on location near Stockton, California. Shamroy began intuitively, much the same as a plant begins growing. He had read and re-read the script many times; had watched the many rehearsals that preceded shooting—and little by little the whole pattern of lighting and photography began to unfold in his mind. "I never have a preconceived idea about how I'm going to photograph any picture," he says.

The plot of "Porgy and Bess" is familiar to almost every lover of the theatre. It is an American folk version of the struggle between good and evil, with the players all Negro.

Bess, beautiful and yearning for love, is abandoned suddenly by the murderous Crown. Porgy, a cripple, takes her in and awakens all the good in her. But the physical appeal of Crown overcomes her when he abducts her from a church picnic. Crown returns to Catfish Row during a hurricane and is killed by Porgy to preserve Bess' new-found decency. While Porgy is being questioned by police, the slick, rascally Sportin' Life induces Bess to go to New York with him. Porgy learns of this, following his release from jail, but with indomitable faith sets out in his goat-drawn cart to bring her back.

"Porgy and Bess" differs from most of the great pictures that have graced the screen in the past in that its story is told with a minimum of dialog, with rendition of the play's great, if not immortal, musical numbers by various members of the cast supplying the main thread of continuity and the key to the story's denouement. The two great arts of drama and music are thus combined to produce an inspiring motion picture.

Camera work began on location late in September, 1958, on Venice Island in the San Joaquin River near Stockton, some 350 miles from Hollywood. Here the Charleston wharf and pier as of 1912 were recreated for the opening scene of the film, in which the fishermen return home from their day's work to the tune of "Summertime." Because the scenes that immediately follow were to be filmed on the huge "interior-exterior" set of Catfish Row erected on one sound stage at the Goldwyn Studio, it was necessary for Shamroy to give special attention to the lighting of the initial exterior scenes filmed at Venice Island, so they

Continued on page 496

CRAP GAME where fight began that ended in murder that places every Catfish Row resident in jeopardy. Here cinematographer Shamroy displayed new and unusual lighting techniques that give every scene the pictorial quality of a painting

WHARF SCENE adjoining Catfish Row erected on Goldwyn sound stage. Shamroy's photography here is most effective in matching actual exterior scenes filmed on a Northern California waterfront location

ONE OF FEW actual outdoor scenes filmed on location for "Porgy and Bess." Here Sammy Davis as Sportin' Life entertains Catfish Row picnickers with his dancing and singing of "It Ain't Necessarily So." Although shot in full sunlight, Shamroy kept overall scene rendition in key with the warm tones established for the interiors.

"An otmosphere of increosin
cotostrophy"—filmin

'ODD

REHEARSING A DAYLIGHT exterior for 'Odds Against Tomorrow" is Director Robert Wise extreme left, addressing actor Harry Belafonte in telephone booth. Meanwhile Cinematographer Joseph Brun, ASC, in leather coat, next to Wise, checks his lighting. Note booster light, also wind machine used to produce effect of wind in scene

IT WOULD NOT BE possible to write about "Odds Against Tomorrow" without starting with the man behind it: Robert Wise, our director. When I say "our," I am sure I am expressing the thoughts of everyone connected with the production, those behind the camera and those in front of it.

Robert Wise never speaks merely for the sake of making conversation. He always means every word he says, and when the word does not come, a simple gesture expressing power and determination completes the sentence. This man breathes, lives, thinks in film terms; his heart beats at film speed. There is greatness in his simplicity and deep knowledge in his modesty. In brief, sheer enjoyment and inspiration for the director of photography.

Thus, when Robert Wise said to me: "I want an atmosphere of increasing menace and a climax of catastrophy; we shall ignore the rules and regulations of conventional visualization." I knew these words were not just another pre-production speech.

Basically, "Odds Against Tomorrow," a Harbel Production for United Artists, is the story of a bank robbery and of the motives leading three extremely different individuals (Robert Ryan, Harry Belafonte, Ed Bagley) to associate in such an enterprise. It is also the story of the hatred between a Southerner and a Negro, a hatred which leads them in an implacable crescendo to pitiful failure and death. It is a hatred without concessions, solution, or sweet appeasement.

The possibilities of "photographic contribution" are plentiful with such a subject. However, my constant preoccupation was to integrate the photography with Robert Wise's powerful way of telling a film story while avoiding obvious and facile acrobatics.

We used wide-angle lenses exclusively throughout the picture: 30mm, 25mm, 18mm, and quite often the 14mm made by Angenieux of France. Most closeups were shot with the 30mm or 25mm, and occasionally with the 18mm. Foreshortening was used as a dramatic element. The 14mm was used for its truly amazing characteristics: not merely for its great depth of field and extremely wide angle, but especially for its presence and participation, and its wonderful rendition of architectural perspective. We used the zoom lens quite often, not as an instrument to obtain magnification or to approximate traveling shots, but as an editorial medium corresponding to a progressive fast or slow switch of image format, or as a rythmic element in combination with sound and dialogue.

One-third of the picture was shot on location in the streets of a small town (Hudson, New York) by bitter, cold night. All studio shots as well as interior locations included apparent ceilings, thus multiplying the lighting difficulties. In one interior scene the camera was on the studio floor. Sol Midwall, my operative cameraman, had to make a 180° vertical pan following Robert Ryan as he moves along a narrow corridor, through a living room, then to a bedroom. Walls and ceilings so enclosed the

menace and a climax af
formula far

AGAINST TOMORROW'

By JOSEPH BRUN, A.S.C

CINEMATOGRAPHER Brun, with eye to finder, checks a camera setup for "Odds Against Tomorrow" from a parallel erected as a location site. Huge blower is set up near by to produce the required wintry winds for the scene. Wide-angle lenses were used exclusively for photographing the picture.

sets there was literally no room for any lights on the floor or on the catwalks. To overcome this problem, I decided to use a mobile microphone boom, temporarily inactive, to mount and move my lights in concert with the action and panning of the camera. Small spotlights were mounted on the mike booms which were extended out into the set. As the camera was panned, electricians moved the boom-mounted lights out of camera range but without altering their effectiveness as the source of illumination. It was an amusing and new kind of show in the studio.

The most challenging part of the assignment, perhaps, was an important exterior sequence which, in the story, was to start at 4:30 p.m. in full daylight and continue into full night, with continuous action on the part of the three principal actors. Director Wise, who rarely uses dissolves for editorial transitions, wanted continuous photographic progression over the whole sequence without resorting to dissolves. Extremely careful planning and a long streak of bad weather enabled us to achieve this interesting sequence. As a result audiences will actually witness the end of a day and the birth of a night in its full progression.

FILMING A DOLLY SHOT on location. Cinematographer Brun's camera crew uses a solid platform dolly "track" here for moving the camera trained on Belafonte, extreme left. Here may be seen the two fill lights (back of mike boom) which provide balancing illumination, while another booster light is set up on sidewalk in distance, properly goboed to shield light from camera lens.

Matching from scene to scene obviously would be the problem here. Shooting required jumping from one location to another, abandoning a well-commenced sequence or an interior set simply in order to hit the right luminosity of a sky or a cloud formation. Filters were used in all possible combinations and f was greatly helped by the variety of film emulsions which are put at the disposal of cameramen nowadays. We jumped from Background-X, to Plus-X, or Tri-X, and used a large quantity of infrared film. The make-up men changed the make-up of the principal actors several times a day to accommodate the change from panchromatic emulsions to infra-red.

The final chase-to-the-death sequence of the picture was shot at night at an oil refinery, on the tops of full gas tanks. During the cold nights, the men had to take extraordinary precautions to observe the strict safety regulations as well as to preserve their own lives. The final fight between Robert Ryan and Harry Belafonte was staged on top of a tank 40-feet high. Illumination could only be obtained from the ground below or from far-distant points. We had worked for four long nights on this sequence and this was to be the last one, as well as the last scene on this frightening location. Then, right behind the rehearsing actors, the sky began to lighten portending daybreak. It then became a race between men and the rising sun. I had mentioned to the crew that no filters or optical tricks could enable us to match the deep, jet-black night effect estab-

Continued on Page 510

THE BIG FISHERMAN and his brother Andrew ride out terrific storm on Sea of Galilee—an excellently effect lighted and photographed scene.

THE BIG FISHERMAN (Howard Keel) center observes tax collectors for Herod Antipas at work. Realistic set was built in San Fernando Valley

ACHIEVING EXTREME depth of field in scenes like this was relatively easy with new Panavision lenses and the Panavision 65 camera.

FEAST PRECEDING beheading of John the Baptist was depicted in silhouette—a scene that required lighting from the floor

Photography Sharp, Clear, And Incisive

Lee Garmes, who believes in sharp, high-definition photography for all motion pictures, found this easy to accomplish with the new Panavision 65 camera when filming "The Big Fisherman."

By FREDERICK FOSTER

IN THE WORLD OF ART, there has always been a marked difference in the detailing techniques of painters, ranging from the extremely sharp to the highly diffused. The work of most Dutch painters of the 17th century, such as Vermeer and de Hooch, is distinguished by infinite attention to even the smallest detail resulting in renditions as sharp as contemporary

TYPICAL OF VISTAS encompassed by Cinematographer Lee Garmes' Panavision 65 camera is this scene of Herodias' arrival at Herod's palace

INTERIOR SETS WERE vast—many reaching into sound stage rafters, and required every available piece of arc lighting equipment to illuminate.

GIANT GAS-MOTOR DRIVEN wind machines were required to furnish gale that demolishes palace, following John the Baptist's beheading

CRISP, SHARP COLOR photography enhances scene of Simon Peter and Fare returning to Galilee and watching Jesus and disciples ascending the Mount

commercial art. The English artist Constable and the Frenchman Monet, on the other hand, went to the other extreme and their work is marked by highly diffused detail requiring viewers to stand away some distance in order to bring all elements into focus.

In modern cinematography there is a similar area of disparity in techniques and photographic results. One cinematographer, for example, who steadfastly holds to the sharp focus technique is Lee Garmes, A.S.C., whose most recent accomplishment—the photography of Rowland V. Lee's "The Big Fisherman"—is currently on many of the nation's theatre screens.

The outstanding thing about "The Big Fisherman" is its photography—

Continued on Page 504

LEE GARMES, ASC, directs the placing of lights for big scene of beheading of John the Baptist, filmed in silhouette in ultra-wide-screen Panavision 65.

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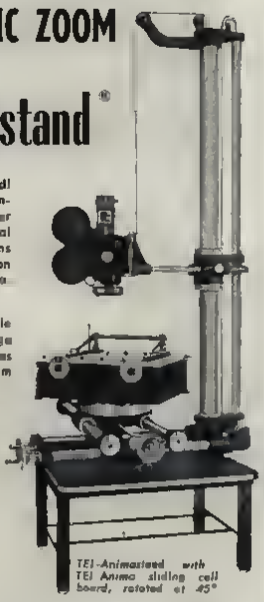

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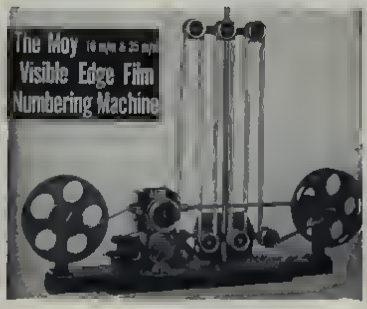

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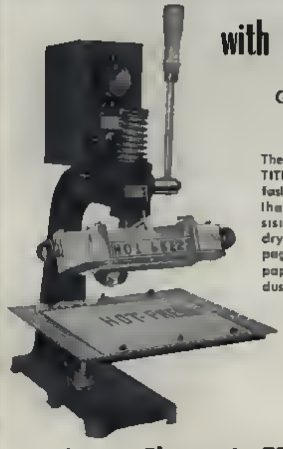

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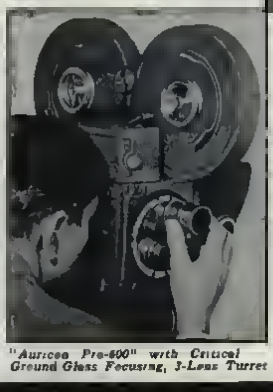

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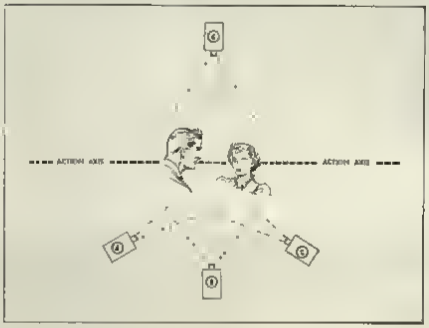
DIAGRAM BELOW illustrates a typical two-shot set-up for filming a scene similar to one at right. In a static scene such as this the camera would be placed at B for a straight-on two-shot; at A for a closeup of the girl, and at C for an over-the-shoulder closeup of the man. During the filming of a series of shots such as this, each of which must intercut with the others, were the camera placed on the opposite side of the action axis, as at D, the players' positions would be reversed on the screen, and the shot would not properly intercut with those photographed from positions A, B, or C



Directional Continuity In Cinematography

PART II: Establishing action axis for every scene is key to maintaining proper screen direction in static shots.

By JOSEPH V. MASCELLI

IN THE DISCUSSION of directional continuity in cinematography last month, the term "action axis" was both illustrated and described as an imaginary line traversing a set or scene and which defines the direction and path of travel or movement of players in the scene—or their position on the set and the direction in which they face—in relation to position of the camera. The purpose of the action axis, it was pointed out, was to enable the cameraman and director, or both, to keep the screen action in each shot properly oriented with respect to lefts and rights. In this article, the importance of the action axis in staging and photographing static shots will be discussed.

Observing the action axis for static set-ups is just as important as when shooting action scenes. In other words, it is just as important for an actor to look or face in the right direction in a close shot as to walk or ride in the right direction in long shots for the purpose of maintaining directional continuity. To simplify reference in ensuing paragraphs to the direction a player looks or faces, we establish here the term "look," which the reader henceforth will understand as denoting the direction a player before the camera faces, looks or glances in static scenes such as closeups, over-the-shoulder shots, etc.

Maintaining directional continuity for either static or action shots is a matter of camera placement with respect to the players. It is therefore the cinematographer's as well as the director's responsibility to see that camera placement is correct with respect to continuity of direction, or look, so that all shots will fall into place properly or "match-cut" when it comes time to edit the picture.

The accompanying diagram illustrates a typical two-shot set-up with the players' positions in the scene denoting the action axis. The two players may be photographed in several ways: facing each other, in individual closeups including over-the-shoulder shots, medium shots, etc. The camera may be placed anywhere within a 180° arc

Continued on Page 501

SISTER LUKE (Audrey Hepburn), right is told by Mother Superior at Convent that she is not yet humble enough to be sent to serve in the Congo. Such drab scenes were test for color camera.

GRIM DUTY IN psychiatric hospital follows disappointment in Congo assignment for Sister Luke. Here she is attacked by an enraged patient—a tense moment accented visually by stark photography.

IN A NATIVE LONGBOAT, Sister Luke, accompanied by hospital Superior, travels downstream to visit an African leper colony. Scenes for entire sequence were shot on African locales.

SISTER LUKE begins to crack up under strain of nursing while trying to be a good nun," tries to conceal fact from sympathetic Dr. Fortunat (Peter Finch).

SHOOTING BLACK AND WHITE IN COLOR

Strong mood and sharp contrasts mark Franz Planer's photography of "The Nun's Story."

By HERB A. LIGHTMAN

IN PHOTOGRAPHING Warner Brothers' production of "The Nun's Story," Director of Photography Franz Planer, A.S.C., has brought into play certain techniques and theories of color photography that not only reveal a virtuoso command of the mechanics of interpreting color in filmic terms, but which also go far toward making this fine dramatic motion picture the visually effective work that it is.

Photographed on location in various cities of Belgium, in Rome, and in the Belgian Congo, "The Nun's Story" is based on a true narrative of dedicated service in which a young Belgian girl takes her vows as a nun and, as Sister Luke, is sent to the Congo to perform the duties of a sur-

FOLLOWING ARRIVAL in the Congo, Sister Luke is shown around hospital grounds by a native. Scenes now take on brighter aspect through straightforward color photography

gical nurse. After years of self-denial and constant struggle with the basic human emotions that threaten to overwhelm her, she finally surrenders to the fact that she is psychologically unadapted to the ascetic life of a nun and, forsaking her vows, leaves the convent to once again enter the world outside.

To emphatically delineate the theme of the story it was absolutely essential to present a harsh visual contrast between the severely cloistered life of the convent and that of the more colorful secular world. The opening sequences of the film demanded a somber colorless photographic mood in order to convey on the screen the psychological oppressiveness of enforced austerity designed to purge the young nun candidates of all wordly emotions and desires.

In order to impel his audience to respond empathically to this atmosphere, Director Fred Zinnemann at first favored shooting the picture in black-and-white—and, indeed, it was not until the company was ready to leave for the Belgian Congo on location that the final choice was made in favor of color. The deciding factor was the realization that the African locations would look too drab in black-and-white, thus weakening the idea of contrast between the two worlds.

The problem then confronting Planer was to depict the ascetic sphere of the convent in severe monotone—to gain, in essence, the effect of a black-and-white rendition with color film. This presented certain difficulties.

"Color is a double-edged sword," Planer explained. "In many ways it is much more difficult to be creative with color than with black-and-white. In black-and-white you have black and you have white plus a range of intermediate gray tones which make it relatively easy to create certain moods and sustain them. In color you may have an exterior sequence that runs six pages in the script and will cut down to about a minute on the screen. Yet it may require three or four days to shoot the sequence. You start to shoot at 8:00 or 9:00 in the morning. The sun is on the left side. You finish at 7:00 in the evening with the sun on the other side and the light a completely different color—and still (in terms of the action of the sequence) it is the same moment and it is supposed to be the same light.

"Sometimes you are asked to shoot a sequence that supposedly takes place at 4:00 o'clock in the afternoon, but the schedule says you must shoot it at 9:00 o'clock in the morning when the light is of an entirely character. In black-and-white, if you need a sunrise, you can get by with a sunset, or vice versa—but a sunrise in color is entirely different in hue from a color sunset."

Such were the challenges that arose in filming the exterior sequences of "The Nun's Story," but Planer solved the problems by using a series of special filters he had designed, which made possible the creation of a specific and consistent mood no matter what time of day a sequence was shot. If the pictorial mood desired was 4:00 p.m. and the schedule called for shooting at 9:00 a.m., he merely selected the proper filter out of his kit, mounted it on his lens, and made the correction accordingly. Surprisingly, he rarely used a color temperature meter to calculate the lens compensations use of these filters involved, preferring to gauge any necessary corrections by eye.

Subduing color in order to achieve the desired effect of drabness in the convent sequences was a special challenge, since it actually is more difficult in color to make something *un*beautiful than to make it beautiful. The object here was effectively to *destroy color*—and with that idea in mind, Planer arranged for all the interiors of the convent sets to be sprayed with gray paint to tone them down. Likewise subdued were rich red velvet hangings of the chapels and even a red Bible with gold-framed pages. All were "grayed" so there would be no vibrant colors to distract the eye.

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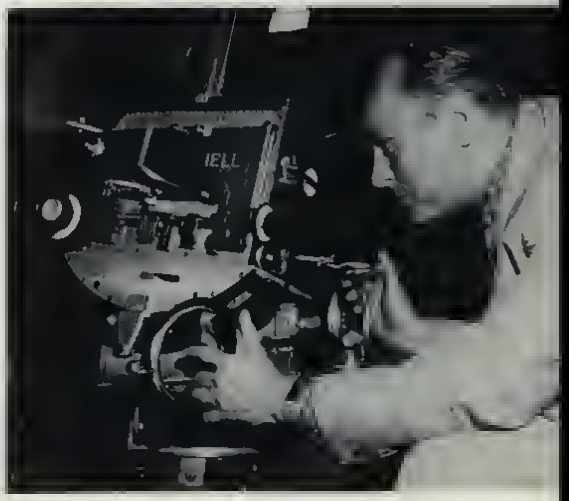

FRANZ PLANER, ASC, in typical pose lining up a scene through finder of Mitchell camera. In photographing "The Nun's Story" Planer displayed an uncommon talent for using color in a scene to key the mood of the action.

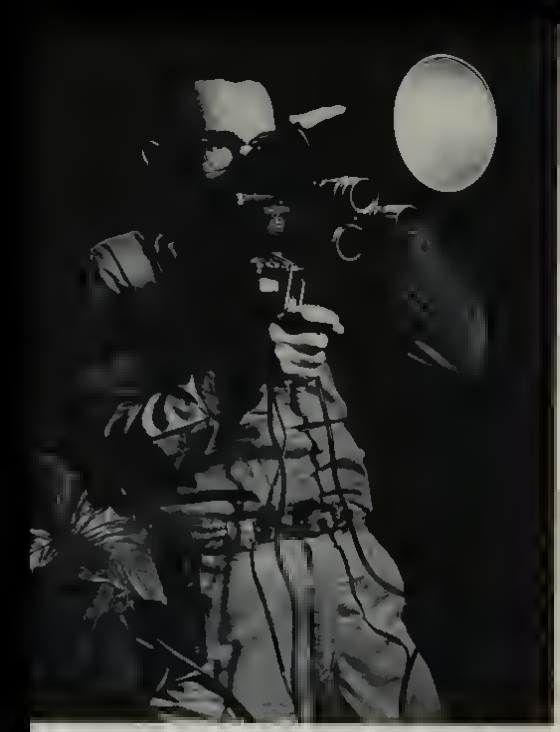

FIG. 1—Author with his Bolex camera equipped with pistol-grip, which has electric switch incorporated in the camera starting trigger for switching on portable light for night and indoor shots. Equipment is shown in more detail in photo at right.

SIMULTANEOUS SWITCHING

Simplifying the problem of switching on lights and camera simultaneously for the peripatetic cameraman.

By ROY ZEPER

IN MANY SPECIALIZED fields of cinematography, there is need to activate an electrical circuit simultaneously with the starting of the camera for lights, remote sound equipment, etc.

During camera operation, the full attention of the cameraman must be directed solely to the subject within the viewfinder. The necessity of throwing an electrical switch separately just before starting, and again after stopping, the camera can result in a complete break of thought and action, as the cameraman fumbles for the switch and then readjusts the finder to his eye.

This situation applies where the conventional bar lights and portable-power lighting units are used in filming subjects at night, such as conventions, etc., also for intermittent operation of two cameras, furnishing cue lights, or to operate a supplementary motor. For such assignments, the motion picture cameraman can ease his task considerably by adding to his camera a switching device that will stop and start the camera and switch his portable lights on and off simultaneously.

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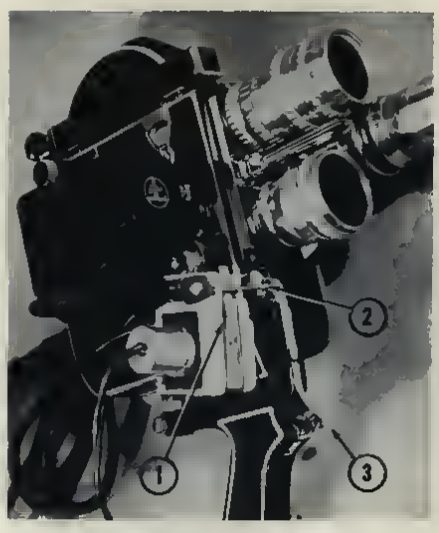

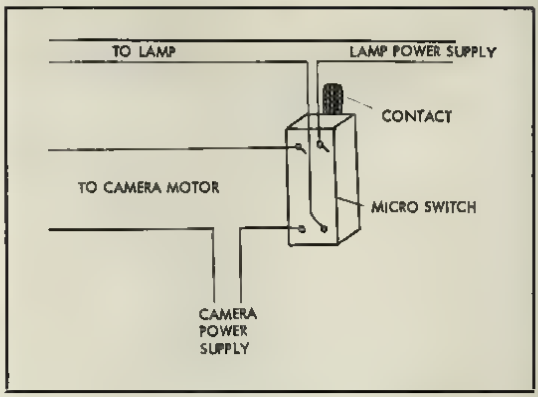

FIG. 2—(Photo above, right). Pressing pistol-grip trigger 3 automatically starts camera's electric motor drive and switches on portable light unit by means of bar contact 2, which activates the solenoid switch 1. Diagram at right is wiring plan for typical micro-switch installation on a 16mm camera.

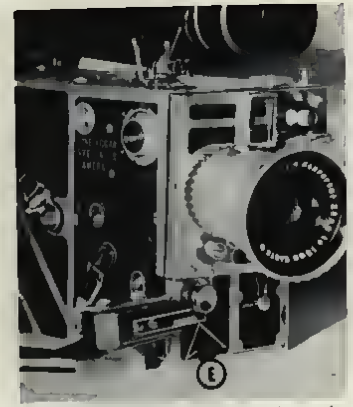

FIG 4—Arrow E points to manner of mounting micro switch so extension fits beneath camera starting button to facilitate simultaneous operation of both.

FIG 5—Micro switch mounted on Eyemo with contact arm (arrow F) extended to facilitate simultaneous operation with camera starting button

FIG. 6—Another application of micro switch and starting button to Bolex H-16 camera. Pressing lever G starts camera, turns on lights.

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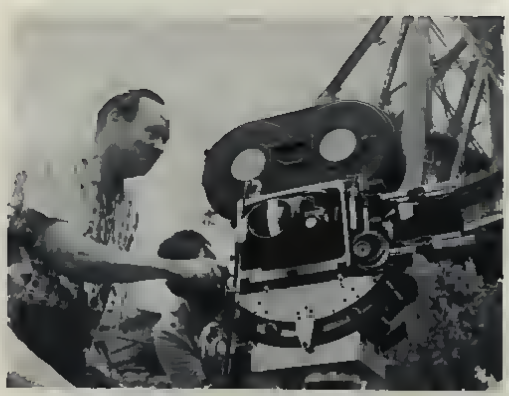

CINEMATOGRAPHER J. Burgi Contner, in plaid shirt, lines up a shot with Mitchell BNC camera for a scene for "Naked City." When shooting scenes in tight quarters, he uses 35mm Arriflex

CONTNER AND HIS crew filming a scene at waterfront during light rain. Fill lights at left of camera bolster the murky daylight for an adequate exposure

We Travel Light And We Travel Fast!

. . . says J. Burgi Contner, A.S.C., who photographs the "Naked City" TV film series in New York. Contner credits present-day fast negatives and efficient portable lighting equipment for enabling him to shoot scenes in almost any weather and location.

By ARTHUR ROWAN

IF YOU'RE A "Naked City" fan, the name J. Burgi Contner, A.S.C.—the man who photographs this popular television show—is not unfamiliar to you. Contner photographed 39 of the series during 1958-59 and will be directing the show's photography again when shooting is resumed this month.

From a production viewpoint, one thing of special interest about Contner's assignment is that the series, consisting of dramatized local incidents, is shot entirely in and around New York City. The series is produced by Herbert Leonard for Screen Gems in Hollywood, where it is cut and edited.

Contner says that except for the shooting ratio of interiors against exteriors, the photography and general production problems of "Naked City" are just about the same as for any of the TV films made in Hollywood.

Because the visual theme of each show is its identity with New York City, 60% of the footage that goes into the average show is exteriors, with the remaining 40% shot in the studio or in location interiors. The company's base of operations, incidentally, is the Biltmore Studio on East Fourth Street.

Whereas the state of the weather invariably dictates shooting schedules for movie making in most locales, as a matter of necessity the producer long ago decided that production schedules would be maintained regardless whether it rained or snowed, as long as it was possible to get an acceptable image on film.

The combination of Contner's vast experience, the availability of high-speed negatives, plus the use of lightweight, portable lighting equipment that can effectively be used in almost any location, all have made possible the tight 3- and 4-day schedules established for each show. "We shoot in all kinds of weather," Contner says, "rain, snow or sleet, day or night."

When shooting under normal conditions he uses Plus-X negative. For

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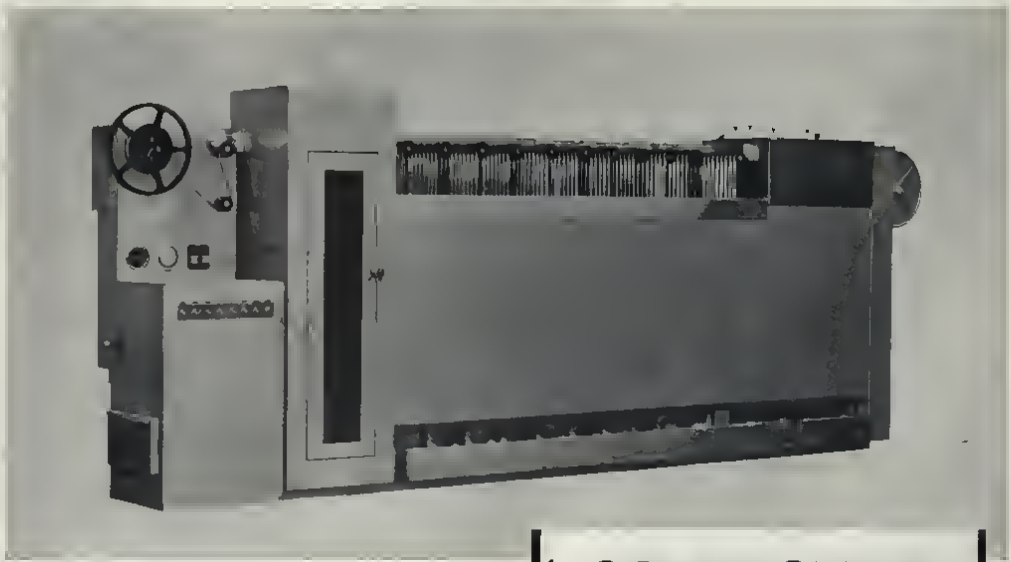

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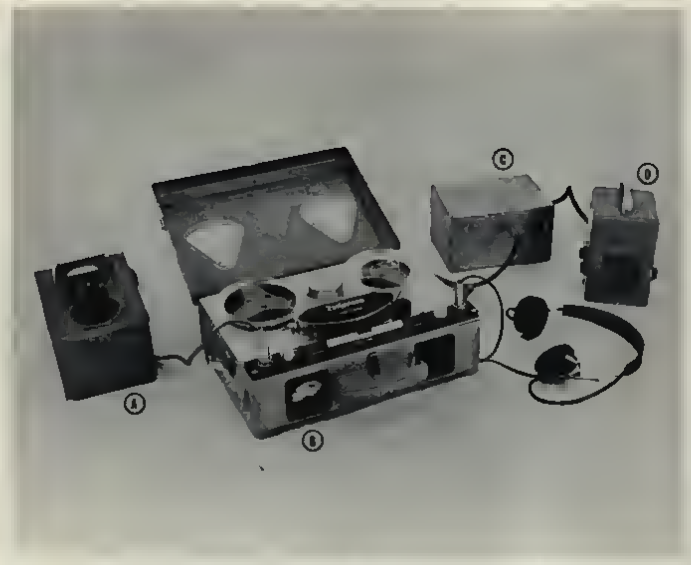

FIG. 1—Equipment pictured here will do anything bulkier and costlier studio sound installations will do. Surrounding the recorder B are modular single-dial mixer A, automatic camera control box C, and transistorized power inverter D. The recorder itself weighs only 16 pounds.

Product report on the

PERFECTONE TAPE RECORDER

Records sound on quarter-inch tape at 7½ ips in sync with any professional 16mm or 35mm camera.

IN ANY DISCUSSION OF sound recording these days, the name *Perfectone* is sure to be mentioned and the Perfectone magnetic tape recorder discussed. For this Swiss-made, transistorized and extremely compact and efficient portable recorder promises just about everything that the professional independent film producer has hoped for: a small, lightweight tape recorder that can be used on sound stage or location with equal efficiency, and which will render synchronized sound tracks of highest professional quality.

A recent development of Produits Perfectone, S.A., Bern, Switzerland, the equipment had its American debut at the SMPTE Convention in Miami this spring, where it was introduced by Eclair International Diffusion of France. Loren Ryder, President of Magnetic Sales Corporation, Hollywood, has acquired exclusive sales and distribution rights to the Perfectone equipment for the U.S. and Canada.

Designed for professional recording on ¼-in. magnetic tape at a speed of 7½-in. per second, where no power supply is available, use of transistorized circuits have made it possible to keep overall dimensions of the recorder to 4 by 13 by 10 inches—making it probably the lightest, most compact magnetic tape recorder ever offered the professional motion picture producer.

In a handsome case only slightly larger than a portable typewriter and weighing but 16 pounds, including batteries, is a complete and efficient transistorized recording and playback instrument capable of producing sound tracks of optimum quality. It can be operated in any movement or position without affecting sound quality. It can be carried by the sound man when making tracking shots, etc., by means of a shoulder strap, as shown in Fig. 2. In this position, the volume indicator and pulse light of the recorder are readily visible. Equally visible is a VU meter on the side of the recorder—useful for checking battery voltage under load conditions. Both earphone and loundspeaker monitoring is provided. During recording, the sound man may check the track by direct monitor or through the reproduce monitor simply by throwing a switch. For greater volume and hi-fi quality in reproduction, an external power amplifier and larger speaker may be used. Output jacks taking "banana pin" plugs are provided on back of the unit for this purpose.

Salient feature of the Perfectone is its ability to produce synchronized sound for and with any professional 16mm or 35mm motion picture camera, entirely free of interlock. A synchronizing signal, generated by the camera motor, is recorded on the magnetic tape. On replay, the full

Continued on Page 494

FIG. 2—Light enough to be carried on a shoulder strap, the Perfectone is ideal for recording synchronized sound for moving camera shots, newsreel photography, etc.

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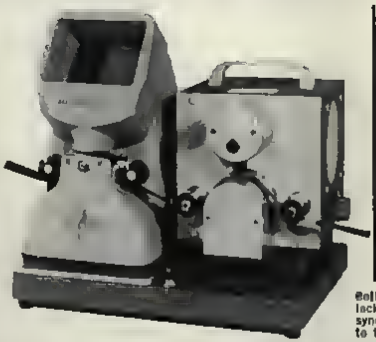

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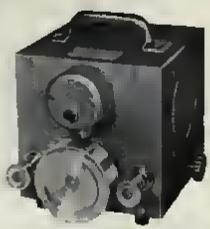

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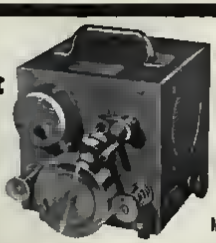

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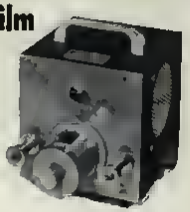

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PERFECTONE RECORDER

Continued from Page 492

width of the tape is scanned, but since the synchronizing signals are in push-pull, they cancel out in reproduction so that only the essential sound track is reproduced in the transfer process. To transfer Perfectone recordings to perforated magnetic or optical film, the push-pull signals are fed into a sync amplifier. The amplified signals control speed of the re-recorder, thus insuring accurate sync between track and picture. In demonstrations of the equipment, synchronization drift was consistently held to within the space of a single film perforation.

The Perfectone method of recording the sync signal on either side of the sound track, which is in the center of the tape, provides maximum available signal-to-noise ratio and minimizes intermodulation and any tendency to print through, which often exists when two separate signals are recorded on the same area of the tape. Also, any tendency for cross-talk between the sync signals and the sound track itself is eliminated.

Position of recorder motor is remote from the capstan shafts and reel spindles to eliminate possibility of magnetic fields and print through. This is a permanent magnet motor with transistorized voltage control plus a centrifugal control for a portion of the motor current. This insures constant rotation speed, with a power input ranging from 18 down to 12 volts, and with a load factor varying by as much as 4 to 1.

Twelve ordinary flashlight batteries provide the necessary 18 volts to power the drive motor, rewind and amplifier. Maximum power consumption is approximately 4 watts and the battery unit, under conditions of continuous operation, should be adequate for ten to twelve hours of shooting. In practice, however, where the recorder is turned off between takes or set-ups, it should be possible to obtain two to five days of service from one set of batteries.

The recording amplifier is 100% transistorized. It has five stages of amplification between the microphone input and recording head. Jacks mounted on back of the recorder provide facilities for picking up sound from an external sound source. The input is bridging with an impedance of approximately 100 000 ohms. It requires a level of approximately "0" dbm and never lower than minus 10 dbm to drive the recorder in this manner.

Fig. 1 shows the complete Perfectone channel. A is the modular single-dial mixer. B is the recorder. C is the automatic camera control box, and D the transistorized power inverter.

With a 3-phase, 220-volt, 60 cycle camera motor, for example, a 220-volt automatic control box (C in Fig. 1) interposed in the camera motor power line stops and starts the recorder in unison with the camera and produces the sync signal. A similar 120-volt control box is also available for use with a single-phase 120-volt, 60-cycle camera motor. For location shooting in areas where power lines are unavailable for driving the camera, a 12-volt DC multi-duty camera motor for Mitchell cameras can be operated through a 12-volt control box.

For shooting on location with an Arriflex, Bolex or similar camera, where the power requirement is under 100 watts, a regular 120-volt, 60 cycle synchronous camera motor can be operated, using a 12-volt storage battery and a new type transistorized inverter combined with the camera control box of the Perfectone equipment. This small, compact and surprisingly lightweight unit has automatic speed control and will supply the necessary 120-volt, 60-cycle power for the camera motor, plus sync pulse to the recorder. Both camera and recorder are automatically started and stopped through the camera switch.

A transistor-controlled motor having automatic speed control, automatic start, and producing a sync signal is also available for the Eclair Camerette and operates on 12-volts, D.C. A prototype is also available for the Mitchell 16mm camera.

Recent tests indicate that many of the DC motors presently in use on professional 16mm cameras can be modified and equipped with a Perfectone control box to provide dependable sync speed plus the sync pulse for the recorder.

The reproducer-monitor, also completely transistorized, utilizes five stages of amplification when functioning as a reproducer-amplifier, with the last stage push-pull. Recorded sound can be reproduced through earphones, or by means of internal or external speakers.

Modular single-dial mixer units are available to work with the Perfectone. An additional modular mixer control unit is promised for the near future that will make it possible for the mixing operator to function at locations remote from the recording unit itself, at distances ranging up to several thousand feet.

This new modular mixer control unit will follow design of latest sound-stage recording equipment to meet the most exacting professional requirements. It will include a microphone and control key for announcing take numbers; a transistorized amplifier to supply direct monitoring at the mixer or for both the mixing operator and sound boom operator; a key for checking the reproducer monitor; volume indicator; and intercom facilities that will permit communication between the recordist and mixer.

Preceding introduction of the Perfectone equipment in Hollywood several weeks ago, a test was conducted at ZIV Television Studios by Ryder Sound Services' engineers in order to compare results of the Perfectone with that of conventional studio sound recording equipment. In the recording session, the sound from a single microphone was channeled to a Perfectone recorder and to a studio recorder so both instruments received the same signal simultaneously. The tapes from both recorders were then transferred to sprocketed 35mm magnetic film and subsequently played back to the engineers by means of the projection room reproducing equipment. Neither track was identified when played. Both Loren Ryder and his sound engineers listened to the tracks and compared them as they were alternately played on the projectors—during which time the projectionist switched the reels to opposite projectors so that any difference in reproducing equipment could be noted. No difference whatever was detected in the sound quality of the two tracks, although the engineers tried

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Because the necessary illustrations could not be made available in time to go to press with this issue, the fourth article in the series on professional motion picture cameras is omitted this month. The series will be resumed in our September issue.

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vainly to identify the Perfectone track.

According to Ryder, Perfectone model EP6A recorders and associated equipment are now available for sale or lease, from Ryder Sound Services, also Magnetic Sales Corp., Hollywood, and Magnapix, Inc., New York City. These companies, also offer recording transfer service on f6mm or 35mm magoetic film, and I6mm or 35mm optical negatives—either variable density or variable area. ■

"PORGY AND BESS" — PHOTOGRAPHIC MASTERPIECE

Continued from Page 477

would match the Catfish Row scenes which were a part of the same sequence.

The authenticity and realism that marks the entire photographic pattern nf "Porgy and Bess" had its very beginning in this initial shot for the picture—the opening scene of the fishermens' return from work at the close of the day. Quite logically the scene appears to have heen filmed about sundown—and it was, the object being to capture the warm, golden glow of evening twilight. It was a cloudy day, and no filters were used. On the screen, this scene flows smoothly into the next—the exterior of Catfish Row, filmed at the studio.

Because this opening sequence of scenes progresses from sundown to dusk, to dark, this had to he clearly ohvious on the screen, Shamroy explained in describing the photography of the production.

"We accomplished the desired gradual change in the lighting," he said, "hy use of dimmer generators, which enabled us to precisely control the ratios of warm or cold light and intermix them."

"When we began shooting on the sound stage," Shamroy continued, "I saw early that warm, subtly colored illumination enhanced the Negro players and this more or less set the lighting pattern for the picture, insofar as filming action on the sound stage was concerned."

The Catfish Row set and the adjoining street, wharf and pier on Stage Five at the Goldwyn Studio were in many respects completely "practical" sets, with all the set components integrated so that most of the picture's scenes—interiors and exteriors—could be filmed there in close continuity.

Catfisb Row, approximately a hollow square, measured f08 feet in each direction. An arched passageway at one end led to the Charleston street and wharf which extended an additional f40 feet, for a total length of some 250 feet. The principal huildings were between 30 and 40 feet high. Here were such practical interiors as Maria's cookshop, Porgy's room, and Serena's home, plus partial interiors of six other rooms.

Though the overall color scheme of the set suggested a mixture of tans, grays and mutèd tones, closer examination revealed that yellows, reds, lavenders, hlues and greens were also employed—and all had been given a careful "aging" effect" to convey a weathered aspect which Shamroy referred to as "sunhurned pastel."

One of the picture's most impressive scenes, from a pictorial standpoint, is that of the crap game on the sidewalk just outside Serena's room. The juxtaposition of the various players, each carefully placed in the scene with respect to the colors of their raiment, and the studied lighting which Shamroy gave the scene combine to produce a rare and beautiful picture reminiscent of a fine painting. It is here, in this early part of the picture one senses that a rare and masterful achievement in cinematography is unfolding and feels its forceful impact for enhancing each player's performance

To accomplish the lighting pattern, which Shamroy hy now had settled upon for scenes to be shot on the sound stage, three power circuits were available. "For each circuit, I had one to three dimmer-controlled generators," Shamroy explained. "For a full daylight effect, I used the white light circuit. The other two circuits provided hlue and yellow light respectively. Where I wanted a sundown or dusk effect, I used a combination of light from the white and the yellow circuits. If I wanted the effect of nightfall, I took out the yellow light and raised the volume of white light and blue light together, with blue light predominating in the scene for night or 'moonlight' effects."

For example, at conclusion of the fight where Crown kills the man Robhins following the crap game, this actinn was shot in 'cold' light. Earlier, the cold light had been softened hy yellow light issuing from open doors and windows of the huildings surrounding the square. But as the fight increases in intensity, and the citizens start to flee the scene, one by one shutters are closed and hlinds drawn until the warm glow of lamplight is no more to be seen, and the whole set is bathed in an aura of faint hlue light.

When the murderous Crown flees, following the killing, and leaves Bess behind, she takes refuge in Porgy's one-room shack. Here there is deliberate sharp contrast between the cold exterior of Catfish Row and the warmth of Porgy's quarters—where the lighting (ostensibly from a lone coal oil lamp) is soft and warm. Here, too, are many interesting lighting effects. The Police arrive, following word of the murder, and begin a door-to-door search As Porgy hears their approach and observes the bright, prohing beams from their flashlights, he snuffs out the light in his room and he and Bess hide in the semi-darkness to avoid questioning. Here Shamroy displays an excellent change of mood in his lighting. The switch from the warm illumination of the lamp to the stark white of the flashlight heams filtering through the shutter slats is skillfully and dramatically done and points up the mounting tension at this point. And when the police move on, the lamp again is lighted and the warmth of the room sets the mood for the romantic development that ensues between the two.

Earlier, during tbe crap game, there is another instance of effect lighting worth mentioning. The over-all illumination on the set, except for that coming from windows and doorways, is a faint hlue-white. Then a woman carrying a lantern enters the scene. "Here f hrought up the yellow light and also the blue light tn heighten contrast between the two to give the effect of the lantern light on the scene," Shamroy explained. The lighting effect is subtly done and deliberately underplayed, and unless one particularly looks for it, the delicate change on the screen very likely may go unnoticed.

Describing further the lighting of this sequence, Shamroy said: "As the fight between Crown and Robhins started, the woman with the lantern ran forward toward the camera. As she did so, I took the yellow light off the background, and now the light was warm in the foreground and cold in the background. There are now strong lighting contrasts in the overall scene—

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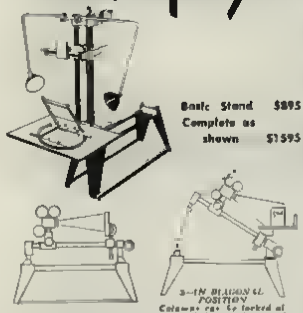

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the blue-white of moonlight punctuated by light here and there issuing from a doorway or a window.

"As the fight progresses, the two men punch there way up a short flight of stairs to the landing in front of Serena's room. The camera, mounted on a mobile boom, now has swung around to capture the violent action and the killing. There is only one spot of warm light in the area and that is coming through the doorway from Serena's room. As Robbins falls, Crown starts his flight. Serena slams shut her door and the last warm light in the scene is extinguished. The camera remains on the cold, dimly-lit scene for a moment then pans slowly away."

Despite Director Preminger's penchant for the moving camera and the fact the Todd-AO camera was crane-mounted for almost every take on the sound stage, there is remarkably little *obvious* camera movement, it is all done so subtly. Shamroy, incidentally, has some very definite ideas about use of the mobile camera, ideas that found a receptive ear in Preminger.

"For wide-screen photography, moving the camera back and forth in a scene is very disturbing," he said. "It's all right for a moving camera shot—that is, panning at the same time the camera is making a follow shot, etc.,—but when you get two people in a scene—say, they walk to one side—let them remain there without panning the camera to keep them in the center of the frame. If the space left vacant at the side is lit properly, subordinate to the action, I believe the scene as a whole will be more effective pictorially."

Summarizing his lighting of "Porgy and Bess," Shamroy said it isn't possible to effectively photograph a color picture in one key throughout. "I treated each sequence differently," he said, "changed the mood; because if an audience sits through a picture for say, two hours and the type of lighting is essentially unchanged throughout, it will tire easily.

"The day scenes in 'Porgy and Bess' were lit with pure white light. There were, of course, some warm touches given the background here and there—as in the long shot of Catfish Row, where there are subtle splashes of yellow and gold light falling on the ground in the middle and background areas of the scene." The effect is much the same as seen in many paintings by old masters.

"When I got into the afternoon and early evening scenes," Shamroy continued, "I started bringing up the yellow light to match the warm sunlight of late afternoon. Then as evening progressed, the colder blue and white lights were brought up in intensity for a full night effect."

About the lighting key used for interior scenes, including the "interior-exteriors" of Catfish Row, Shamroy invariably worked in a very high key in order to get sufficient depth of field. Most scenes were shot at f/4 or f/4.5, with the lighting key ranging from 900 to 1800 foot candles, he said.

"In photographing a color production," Shamroy explained, "the amount of light and the number of lighting units required are enormous. There must be some thought toward this when sets are designed and constructed. Too many art directors forget that this is a business of improvisation. The 'Porgy and Bess' sets were virtually permanent sets and therefore posed some difficult photographic problems. The interior sets were complete with ceilings or heavy beams; there were no 'wild' walls. I had to have my grip undo much of this so we could get the camera as well as lights into the set. My primary aim, of course, was always to get a decent exposure and at the same time get a little dramatic effect here and there into the lighting.

"Perhaps the major problem was getting the illumination in various scenes just right so there would never be a sharp difference in the skin tones of the light-skinned Negroes compared with the dark. To keep contrasts here to a minimum, I used a great deal of yellow light in such scenes as the saucer funeral sequence and in other scenes where there were large numbers of players. This was a bit difficult because colored people do not reflect light as do white people. The problem was to equalize, as much as possible, the extremely dark with the extremely light when both appeared together in scenes. To accomplish this, I used a substantial volume of warm fill light on the players' faces.

"This problem of contrasts was forever present in the scenes in which Dorothy Dandridge and Sidney Poitier played together. Miss Dandridge's skin tone is quite light, while Poitier's is quite dark. In no instance did I gauze the light on them. Instead, I used colored gels on the lights which gave a mellow quality to the lighting and this produced the desired equalization of skin tones."

Much as we should like to include here a complete description of the lighting and photographic techniques employed by Shamroy in photographing all of the major scenes in "Porgy and Bess," the limited available space unfortunately places a limitation on this report But the techniques so far revealed also were employed for the rest of the picture.

For Leon Shamroy, "Porgy and Bess" is another milestone—the brightest, perhaps—in his long and illustrious career. Into this fine picture went Shamroy's greatest and most imaginative efforts to date. He has every right to be justly proud of the achievement.

BLACK & WHITE IN COLOR

Continued from Page 487

The make-up of the players also was subdued to tone down even the natural pigmentation of the skin. White greasepaint was used to subdue eyebrows and lips—and yet, great care was taken so that the faces would not appear mask-like. On the contrary, the fragile contours of Audrey Hepburn's face were lighted to create the effect of an animated Dresden figure The face of the Mother Superior, symbol of authority and detached benevolence, was rim-lighted in such a way as to produce almost the aura of a halo By way of contrast, the face of Peter Finch (who plays the virile and cynical jungle surgeon, Dr. Fortunati) was lighted to accentuate his rugged masculinity.All this is in key with Planer's conviction that a face is made interesting on the screen, not by means of make-up or tricks of diffusion, but by effective lighting of the facial planes.

The nuns seen in the convent sequences were actual nuns and nothing relative to them or their attire could be changed. The habit of the nun is, of course. black and white—two "colors" usually considered too contrasty to be photographed in color without modification. Nevertheless there was no substitution of off-white or off-black fabrics made. The habits were shot "as is" and the result is not harsh or disturbing on the screen.

Since the story is basically a study in character, there is a great deal of emphasis on closeups. Both Zinnemann and Planer were opposed to shooting the film in one of the ultra wide screen processes because, whereas the anamorphic lens is perfect for capturing the sweep of an outdoor epic in which space itself becomes an "actor," it is not very satisfactory in achieving the intimacy demanded by a more closely confined dramatic subject, because ultra wide-screen closeups must necessarily be composed with an excess of space at the sides of the frame. For this reason, Zinnemann decided to film "The Nun's Story" in the moderate wide-screen aspect ratio of 1.85-to-1 just as he did with his Academy Award-winning film, "From Here to Eternity".

All of the exteriors of the convent sequences, which were filmed in various cities in Belgium, were purposely shot on overcast days to accentuate the desired somber mood And yet, the effect is not depressing. These scenes have their own subtle beauty, even though there is no brilliant color in evidence. There is a kind of muted glow one finds in old tapestries or oil paintings softened by the patina of centuries. The results are very much in key with Planer's preference for working with subdued exterior light.

"Artists always favor skylights on the north side of a studio because they know that true color does not exist in bright sunlight," he explains. "An even light renders colors in a much more honest way, and from the cameraman's viewpoint it is technically much more staisfactory since he need not struggle with the problem of having to compromise between exposing for the keylight while trying to get some luminosity into the shadows."

In dazzling contrast to the convent sequences are the scenes shot in the Belgian Congo. The verdant lushness of the foliage itself, the foaming turbulence of jungle rivers, the colorful trappings of the natives—all combine to produce an almost kaleidoscopic effect. In psychological contrast to the earlier sequences one is made strikingly aware that here is life—primitive, violent and surging with color. Thus. one can empathize with the inner excitement of the young nun as her new and colorful surroundings begin to act as a catalyst—stirring up old fires, reactivating dormant emotions, creating acute conflict between dedication to an idealistic goal and the urge to live in the full freedom of worldliness.

The photographic quality of the Congo scenes has a character uniquely its own. Instead of sharp contrast there is a peculiar softness (almost as if the sequence had been shot through a light diffusion filter) which imbues the ac-

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tion with a certain dream-like quality and produce the pictorial effect of a fine painting.

Explaining this phenomenon, Planer observes: "I was very much surprised with the results achieved here. I had filmed in Africa before but never in the Belgian Congo. I expected a harsh strong light. But instead, the frequent rainstorms gave the atmosphere a certain 'veil'—a kind of natural diffusion The hot ground steams after a rain and tiny particles of water hang suspended in the air for many hours afterward, so that even in the strongest sunlight there is a soft effect."

Because the decision to film in color was made just prior to leaving for the Congo, Planer had considerably less time to prepare for the photography of "The Nun's Story" than he might have liked. Also, he had to shoot "blind" for several weeks, inasmuch as is was impossible to get rushes back from the lab and have them projected in time to make any necessary corrections as shooting progressed. This called for getting everything right the first time.

Planer took with him a basic crew of six from Hollywood, which included a gaffer, a special effects expert and several assistants. His operator, however, was an Italian technician. The overall shooting schedule embraced approximately four months including all locations as well as the sequences shot at Cinecita Studios in Rome.

Photography of "The Nun's Story" is straightforward and honest—devoid of arty frills. There is very little camera movement and no spectacular angle shots. Planer has, however, taken full advantage of the innate visual force of his subject—adopting camera vantage points, for example, that dramatize the patterns of the nuns in ritualistic ceremony, the fluid geometry of their stately and deliberate movements as row on row they move through paths symbolic with centuries of meaning

"I do not believe in photography for the s a k e of photography," Planer states. "but I am always ready to stick my neck out for a creative result, even though I may sometimes make a mistake. One must use both his eyes and his heart in cinematography in order to get a true feeling for the scene and give the director what he wants. My aim is simply to tell the story in the most effective and dramatic way possible."

In photographing "The Nun's Story" Planer has done exactly that. ■

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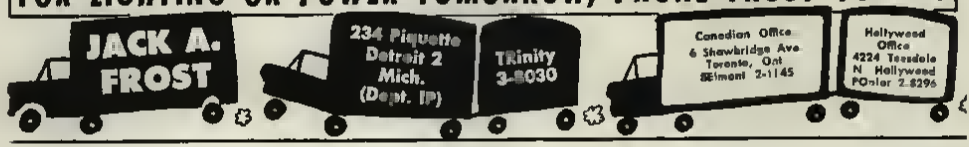

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DIRECTIONAL CONTINUITY IN CINEMATOGRAPHY

Continued from Page 485

described about the action axis. It may be moved in or out or from one player to the other, as long as it does not cross to the other side of the action axis. However, the camera may not be moved 180° from one set-up to another. It may be moved within 180° —a complete semi-circle—on one side of the action axis only. All shots made from these camera positions will "match-cut." If the camera is moved to the other side of the action axis, as in position D in the diagram, a different aspect of the scene, which we call a "fake reverse," will result in which the players will be transposed to opposite sides of the frame. If only one player is filmed in closeup from this camera set-up, he will appear facing away from the other player, rather than toward him.

Are there exceptions to this rule? Yes. The players, the camera, or both may cross the action axis *while filming is in progress*, and since the audience will see the directional change taking place on the screen with the players maintaining their relative positions, orientation will be maintained. On the other hand, the players or the camera alone may not cross the axis *between* shots because their relative positions will have changed unaccountably and the ensuing shot will not match-cut the preceding one as it should according to the script.

A new action axis should be established at the conclusion of each scene so that the succeeding shot will match. This is important since the players may change their relative positions, or the camera may dolly about the set creating a new look in a different direction than that with which the scene began.

When a master scene is to be shot —one in which the entire action is photographed straight through in a single take—it is necessary to establish the action axis through the players

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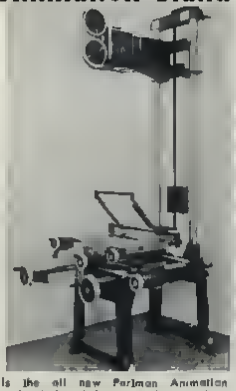

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at the particular point in the scene where a closer shot will later be cut in. This becomes a bit tricky if a great deal of movement takes place and several medium shots and close-ups are filmed later. For the subsequent shots must match the look of the player or players at the instant that the two scenes are cut together. Cutting in the camera—in which a sequence is filmed bit by bit as it progresses—is actually simpler because the action is frozen when the camera stops, an appraisal is made of the final position of the players, and the new set-up is figured with a new axis established. The master scene method, which is favored by many directors, requires that marks be made on floor of the stage or notes made on the script margin as a guide so that the subsequent closer shots will inter-cut and match the look perfectly.

While the camera angle may not cross the action axis, the camera itself may physically cross over to shoot a scene at the rear of the set. The camera may move in or out providing its new shooting angle is similar to one that would be correct for the original action axis. A cut-in reaction shot of a distant player may be filmed, and will match-cut, if it is shot from a camera angle that is established by an axis drawn parallel to the original action axis. A simple way to decide the matter is to remember that the camera may move in and film *any* shot that it could photograph from across the original axis, using a telephoto or zoom lens. In other words, the camera may be moved in optically, so to speak, rather than physically. A shorter lens, however, is substituted, and the camera "cheated" in closer to the shot.

The action axis should also be established when shooting cut-away shots. This imaginary line will extend in a straight line from the player featured in the previous shot to the player to be photographed in the cut-away. The camera is placed on the same side of the axis to match the look correctly.

Subjective camera angles, or point-of-view shots, in which two players look directly at each other, should be filmed with great care to avoid mismatching the look. There is often the misconception that because a player is looking directly at the camera the look is neutral. But there is always a slight angle which results in subject facing a definite direction. It should be remembered that the look in a full face closeup is governed by the way the player directs his eyes. With only a slight shift of the eyes, he can appear to be looking to the right or to the left. The same is true where the player's head is turned but slightly to the right or to the left.

Directional continuity must be carefully observed by the cameraman shooting scenes to match stock shots. Take, for example, a stock shot of an audience listening to a speaker, with the people in a three-quarter side angle, looking screen left. Since the audience is facing left, it naturally follows that the speaker should be photographed facing screen right. A simple method of figuring such scene matches is to mentally pan the camera from the audience to the speaker, as if both were being filmed at the same time. At conclusion of the pan, the matching look and subsequent camera angle will be obvious.

This same imaginary panning technique will aid the cameraman get his bearings when shooting two separate matching shots in different locations. Say, an auditorium interior must be filmed in one building (because of its particular size or its lighting problem), and action on the stage must be photographed at another location (because it better fits the script). Best results would be had by photographing the stage action first, as a key to making the matching shots. Perhaps the stage action consists of a lone speaker. By photographing his performance first, we determine which way he will face—right or left—then by mentally panning from the speaker to the audience we establish in our mind the position the camera must take to photograph the auditorium interior at the second location so the audience will appear to be facing the speaker.

To some, the principle of the action axis keying directional continuity may appear as tending to stifle the use of varied camera angles in the production of theatrical films so that all action is played "stage front." This is not true, however. The camera, the players, or both are free to roam the set with the camera shooting in any direction. The purpose of the action axis is to establish boundaries that tend to keep all action in correct directional continuity, so that players will not appear looking away from each other in a shot, when they were shown looking *at* each other in the shot preceding.

All this may seem quite elementary to cinematographers of long experience, but it sometimes happens that even a veteran will be momentarily stumped in his screen directions when faced with shooting a scene intended to match-cut with one shot a week earlier. It is the changes *between* set-ups that must be carefully handled so that consecutive shots will match. The axiom of the action axis and the matched look is as basic as any law of physics or chemistry. The audience cannot be brought under the spell of the film it is watching if it is constantly distracted, jarred or confused with jump cuts due to unaccountable changes in people, objects or backgrounds facing the opposite way to that established.

This does not imply that the rules cannot be broken for dramatic effect, if necessary, or that a complete reverse angle cannot be filmed at any time.

Before a camera angle is completely reversed, however, a thorough analysis should be made of the filming situation. An audience will have no trouble following a film story if the camera does not cross the axis, and care is taken to match the look and position of the players. But the moment a reverse angle is introduced it is the same as if the viewer were lifted bodily out of his seat and transported to the opposite side of the set. Unless there is sufficient reason to reverse the camera and unless care is taken to re-establish the set and the players, confusion is bound to result.

If a completely reverse angle is desired—to show action on the opposite side of the set, to introduce new players or simply for visual variety—it is possible to cross the action axis safely if a few simple precautions are taken. The point to remember is that the audience must be made immediately aware that the camera has now turned around and is viewing things from the opposite side. To accomplish

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this without jarring audience sensibilities, one may use a simple little trick such as having the players turn completely around and look toward the rear of the set. Then the camera can cross the axis and make a complete reverse shot; but the audience will not be confused because it now quite naturally expects to see the player's faces. The audience becomes re-oriented and the sequence can continue with the camera now on the side of the newly established axis. If the players had not turned, however, confusion would have arisen because the viewer would suddenly see them transposed and also be confronted with the opposite side of the set.

It is permissible to cross the axis in a scene where the players walk directly away from the camera. The next scene may be a complete reverse —with the players now walking toward the camera. The movement of the players and the fact that the camera films their backs in one shot and their faces in the next is suffiicient to carry the audience's viewpoint across the axis without confusion. People can, for instance, be shown with their backs to the camera walking toward a waiting airliner. The next shot can depict them as seen from the plane's doorway as they approach and enter.

On the other hand, an abrupt change in camera angle to, say, a very high angle, should be handled with discretion If the camera is shifted to a very high angle, it should stay on the same side of the axis as that established at the end of the previous scene. If, on a direct cut, the camera is moved up high *and* reversed, the audience will be doubly confused because it will take a little time to become re-oriented and to figure out the viewpoint.

Another method of crossing the action axis safely is to make a circular or lateral dolly shot as the scene progresses, so that the shift gradually takes place as the action is being photographed. A new axis is thus established and shooting can continue safely with the camera on the opposite side. The same effect can be accomplished by having the players cross the axis in the course of filming the scene so that the camera must be panned to follow them. As they move around, the camera will reverse its angle to follow them and ultimately will be shooting in the opposite direction. The camera, subject movement, or both may safely cross the action axis and reverse the angle without confusing the audience because the audience can see the change taking place on the screen.

In conclusion, keep the action axis in mind at all times when shooting a scene, and never cross it unless the necessary precautions are taken Like all rules, this one may be broken, too, but one must be certain before doing so that the resulting reverse-angle taken in by the camera will not confuse the audience. ■

PHOTOGRAPHY SHARP, CLEAR

Continued from Page 481

sharp, clear and incisive. In the hands of veteran Garmes, the Panavision 65 camera has rendered screen results that are distinctly different from anything seen before in ultra-wide-screen photography. One is brought sharply to attention as the first scene flashes on the screen with incredible clarity. Facial details have the crispy sharpness of a commercial photograph, and the remarkable depth of field which renders background vistas in clear detail gives a new dimension to the photography. "I always strive for extremely sharp focus in the pictures I photograph," says Garmes "I believe in that."

Commenting further on the photography of "The Big Fisherman," Garmes said: "I used the Panavision lenses to the fullest extent I could on exterior shots, in order to get the maximum sharpness of detail. Indoors, I aimed for similar results by utilizing all the light available to achieve it. I believe that more Brutes and other arc lamps were used to light this picture than have ever been used before in a Hollywood production.

"Some of the indoor sets were the largest and tallest ever built on a Hollywood sound stage. One set particularly—that of the castle interior of Herod Antipas, Tetrarch of Galilee —extended right up to the rafters."

The entire production design of the picture—sets, costumes, props, etc.—is so colorful and full of splendor, that sharp photography was indeed vital to producing the visual and emotional response it was intended to create.

Sharp photography is the salient attribute of the Panavision 65 camera. This is basically a Mitchell 65 camera, which takes 65mm negative, and is modified with the improved Panavision lenses that have created widespread interest in the industry.

"Insofar as lighting goes, the Panavision system demands nothing more than is required for other wide-screen systems of color photography," says Garmes. "We simply work with wider film. Focus is tougher because we use lenses of longer focal length than in 35mm photography. Where we'd normally use a 15mm lens on a 35mm camera, it requires a 4-inch lens, which falls off critically in focus, to make a comparable shot with the Panavision 65 camera," Garmes explained.

"The Panavision lenses we used," he continued, "were all brand new, incorporating Panavision's latest advances in design and optics. I used a 37mm lens practically all the time. This is equivalent to about an 18mm lens in 35mm photography. The 37mm doesn't have much depth, either; it's approximately a 40mm lens."

When the crab dolly was introduced in Hollywood several years ago, Garmes became its greatest booster and user. It is not surprising therefore that he chose a crab dolly for his main mobile camera mount in filming "The Big Fisherman."

"Executing moving camera shots," he explained, "were rather difficult for my operator because the camera we used was equipped with a finder designed to be used with an anamorphic lens. This created a troublesome parallax problem when making follow-focus shots."

At the present time, Garmes said, this problem is being corrected with a newly-designed finder for use with cameras mounting Panavision lenses without the anamorphic attachment.

"The Big Fisherman" is based on the book by the same title by the late novelist, Lloyd C. Douglas. Its basic theme is the story of Simon Peter and his times, of his transformation from a doubter and scoffer into a man of rock-bound faith, and his dedication to the teaching of the word of God as a disciple of Jesus.

Integrated with this spiritual theme is a romantic story of ancient vengeance. A young Arabian princess learns the father she has thought a great king is in reality a brutal tyrant who betrayed her mother and who has made her country suffer. Dressing as a boy, she sets out for Galilee to kill him. During the journey she encounters many hardships. Arriving

at Galilee she is taken in by The Big Fisherman and contrives to find employment in her father's palace. Hearing the preaching of Jesus, however, she is impressed with the commandment "Thou Shalt Not Kill," and dramatically abandons her mission.

Practically all of the picture's exteriors were shot first—most of them on the locations adjoining Lake Chatsworth in San Fernando Valley. Here Producer Rowland V. Lee found vistas and terrain so similar to the actual Biblical locales, that he decided to shoot the entire production near Hollywood instead of in the Holy Land, which had been considered earlier. It was concluded that the film would gain more in reality and technical excellence through use of locales and facilities available nearer Hollywood. "Moreover," Garmes said, "Rowland Lee felt this offered a two-fold advantage: he would be giving employment to a vast number of Hollywood's experienced actors and technicians, so vital to the industry, and at the same time he would be assured of the services of the most expert motion picture technicians and workmen."

When shooting many of the exteriors near Lake Chatsworth, the vast Rocketdyne plant nearby created a problem when, at around 3 o'clock each afternoon, the parade of workers traveling to and from work on a distant road was clearly in range of the camera. The problem was soon solved, however, by erecting a camouflage of trees, shrubs, etc., to obscure the one note of modernity that intruded on the otherwise historical vista.

"This picture was well prepared beforehand," said Garmes, "and this eliminated most of the problems the cameraman usually encounters when shooting a spectacle production. I think careful planning is one of the most important things that can be done on a picture of this type. We shot a great number of tests of all the principal members of the cast to insure that makeup, hairdress, costumes, etc., were correct as to appearance and color. We got all the 'wrinkles' out so there was no guesswork whatever when it came time to shoot a scene."

A staggering total of 73 major sets were constructed for the picture. One of them, built on a hill overlooking Lake Chatsworth bordering on producer Rowland V. Lee's San Fernando Valley ranch, represented the city of Tiberias, on the Sea of Galilee. Among the imposing structures were the Tetrarch's palace, mansions of the nobles, an amphitheatre, temples, and Simon Peter's home.

Other huge sets represented streets of ancient Rome, the palace of Emperor Tiberias; Jerusalem and the palace of Herod the Great; plus farm houses, markets, hovels, etc.

A hundred and fifty miles distant, near Palm Springs, a sprawling Arabian tent city was erected, representing the king's encampment. Here also a number of exteriors for the picture utilizing the natural terrain as a backdrop were photographed. Interiors of palaces and Galilean homes were constructed on studio sound stages.

(Continued on next page)

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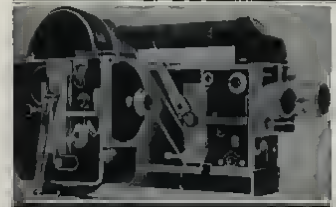

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All this will give the reader some idea of the scope of the sets and of the photographic undertaking required of Garmes and his camera crew to put this Biblical story on film. It was the great scope, in both story and settings, that led to the decision to photograph "The Big Fisherman" with the Panvision 65 camera.

"But there is really no spectacle to this picture," Garmes reminded. "Rather it is more of an intimate story. The scope is a visual thing—enhanced by the great depth of the scenes, and the sharp focus, clarity and vivid full-range of color that prevails. The camera work is just straightforward photography—nothing arty has been attempted. Lighting in planes prevailed as a pattern for most of the interiors, and the aim always was for full exposures for the most brilliant results." ■

WE TRAVEL LIGHT, FAST

Continued from Page 490

night shots and for shooting on location with existing light. he uses Tri-X. When filming on location, power for the camera, sound equipment and lights is furnished by a portable generator mounted on a trailer. Lighting equipment used on location consists of six Garnel lights, 4 Colortran units, plus an assortment of clip-lights.

Contner uses a Mitchell BNC for all shots except those made in unusually tight quarters, for which he uses a 35mm Arriflex. For shooting exteriors in cold weather with the BNC, Contner utilizes commercial hand warmers, such as sold to hunters, skaters and skiers. The warmers, which generate heat from ordinary lighter fluid, are inserted within the camera box and are highly efficient and safe, according to Contner.

A typical recent show in the series was based on an armored car robbery. A great deal of the action was shot on and within a Staten Island ferry as it travelled between the island and New York. Toughest part of the job for everyone was staging and shooting scenes in the boiler room, where the temperature was above a hundred.

For climactic chase scenes, the company moved to Riverside Church. Contner lit the interior with Colortrans and shot most of the scenes with an 18mm wide-angle lens. The chase proceeded up the church's bell tower, thence to the roof, and for these shots Contner used the Arriflex.

Contner is no newcomer to the business of photographing films for television, and his record easily places him among the veterans in this field. He shot the first 13 "You Are There" for CBS; 39 shows for the "Registered Nurse" series, 39 "I Spy," featuring Raymond Massey; and 39 of "The Goldbergs" series. Earlier he had shot a segment of 13 shows for the Melvin Douglas "Off Beat" series; 37 shows in "The Doctor" series; 26 "Top Secret" segments, plus numerous individual shows of other TV film series which are produced in New York City.

Although cinematography is Contner's favorite vocation, he is well-known for his other pursuits related to motion pictures. Turning the clock back a few years recalls the time Contner, then a youth in Lakeland, Florida, became a projectionist. Sometime later he purchased a 35mm motion picture camera and produced local screen ads, then a local newsreel. To speed up the process of getting his films on the screen, he set up his own motion picture laboratory.

With the advent of the "talkies" a few years later, theatres were thrown into a furor because of the many different sound systems that were being devised. Contner developed a method that enabled any theater to project silent films, sound-on-disc films, or SOF without having to install separate adapters for each. The idea seemed so promising that Contner went to New York where he set up a manufacturing plant to turn out his multi-system adapter. He subsequently developed other sound devices for motion pictures and soon Contner's *Blue Sea Sound Devices* became famous throughout the industry.

With the advent of color motion pictures, Contner temporarily switched his interests from sound to color cinematography, and he reportedly is the first American cinematographer to shoot bi-pack color. Years later he established the first color film laboratory in New York. His process was tradenamed Super-Color and later became Cinecolor.

Contner has since left the color film business to Technicolor, DeLuxe Laboratories, and to Eastman Kodak Company. He continues his Blue Seal sound devices business, but his chief activity is photographing motion pictures for television—like "Naked City." ■

PHOTOGRAPHIC ASSIGNMENTS

Continued from Page 462

REVUE STUDIOS

JOHN RUSSELL, ASC, RAY RENNAHAN, ASC, "Mickey Spillane's Mike Hammer"* (Revue Prods.)

RAY RENNAHAN, ASC, WILLIAM SICKNER, ASC, "Bachelor Father"* (Bachelor Prods.) with John Forsythe

JOHN WARREN, ASC, LIONEL LINDON, ASC, "Johnny Staccato"* (Revue Prods.).

LIONEL LINDON, ASC, RAY CORY, ASC, "Deputy"* (Revue Prods).

LIONEL LINDON, ASC, BURT GLENNON, "Laramie"* (Revue Prods.).

GILBERT WARRENTON, ASC, "M Squad"* (Latimer Prods.) with Lee Marvin Don Medford, director.

JOHN RUSSELL, ASC, "Alfred Hitchcock Presents"* (Revue Prods.) Alfred Hitchcock, director.

RUSSELL METTY, ASC, "Spartacus" (Technirama, Bryna Prods.) with Kirk Douglas and Laurence Olivier Anthony Mann, director.

PHIL LATHROP, "The Private Lives of Adam and Eve" (Zugsmith Doff Prod.) with Mickey Rooney and Mamie Van Doren. Albert Zugsmith and Mickey Rooney, directors

RKO GOWER

STO HICKOX, *ASC*, ROBERT DE GRASSE, ASC, "Lucille Ball, Desi Arnaz Show"* (Desilu Prods.) with Lucille Ball and Desi Arnaz.

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ROBERT HAUSER, "Wyatt Earp"* (Desilu Prods.) with Hugh O'Brian.

PAUL IVANO, "The Texan"* (Desilu Prods.).

CHARLES STRAUMER, "Westinghouse-Desilu Playhouse"* (Desilu Prods.) Sidney Miller, director.

REPUBLIC STUDIOS

EMMETT BERGHOLZ, "Troubleshooters"* (Filmaster Prods.) with Keenan Wynn, Bob Mathias. Robt Altman, director

GEORGE DISKANT, ASC, "June Allyson Show"* (Four Star Prods.) with June Allyson, Don Medford, director

HAL ROACH STUDIOS

FRANK CARSON, "The Dennis O'Keefe Show"* (Cypress Prods.) with Dennis O'Keefe.

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LEO TOVER, ASC, "A Journey to the Center of the Earth" (CScope & Color) with Pat Boone and James Mason. Henry Levin, director

SAM LEAVITT, ASC, "Five Gates to Hell" (James Clavell Prod. CScope) with Patricia Owens and Neville Brand. James Clavell, director.

OTTO HELLER, "A Dog of Flanders" (CScope & Color; Radnitz Prod.; shooting in Amsterdam) with David Ladd and Theodore Bikel. James Clark, director

FLOYD CROSBY, ASC, "Condemned Patrol" (API Prod.) with John Lupton and Ziva Rodann. Bernard Kowalski, director.

MAURY GERTSMAN, ASC, Adventures in Paradise"* with Gardner McKay.
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HAROLD STINE, ASC, "Sugarfoot"* with Will Hutchins.

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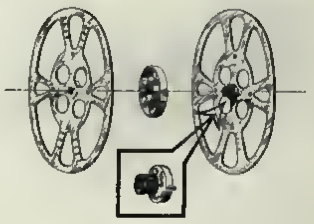

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WHAT'S NEW

Continued from Page 464

Interval Timer

Camera Equipment Co., Inc., 315 West 43rd St., New York, N.Y., announces a new interval timer called the CECO Programmer, Model 640-A. Designed for a wide range of scientific and research uses, unit will control three separate electrical circuits at intervals predetermined by the user. An integral feature is a pulsing switch useful for controlling cameras and lights for time-lapse photography More complete information and price may be obtained by writing Mr. Allan Green, in care of Camera Equip. Co., Inc.

Sixtomat X2 Meter

Kling Photo Corp., 257 Park Ave. South, New York 10, N. Y., announces it is distributing exclusively in the U. S the German-made Gossen Sixtomat X2 exposure meter, scaled for both motion picture and still photography. Special features include highly sensitive free-swinging indicator needle that reads fractional f/stops; indicates exposures simultaneously for standard shutter speeds, new ASA even-progression speeds from 1/1000 sec to 4 minutes. and EV scale from 0.5 to 19.5. Exposures are also indicated for motion picture camera speeds of 8, 16, 24, 32, 48 and 64 fps. All film exposure indexes from ASA 6 to ASA 1600 can be pre-set.

Th meter measures 3" x 2" x 1⅛". weighs 5 ozs., and retails for $19.95.

Comero Dolly Conversion

Cinekad Engineering Co., 763 10th Ave., New York 19, N.Y., announces a custom conversion for the Houston Fearless Panorama Dolly, Raby Perambulator, and Camart TV Dolly which converts them to a crab dolly, providing easy movement in all directions. Conversion requires dolly to be sent to Cinekad factory. Write Cinekad direct for prices.

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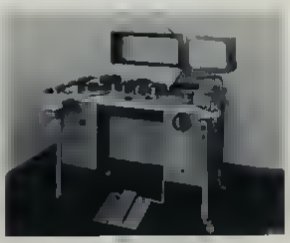

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CORRECTION

News item in this column last month describing the new Western Cine Automatic hot splicer, erroneously listed price as $29.00 The correct price is $229.50

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STUDIO & PRODUCTION EQUIP.

CAMERAS 35mm

MITCHELL NC-HEAD, shipped, needs considerable repairs ..... $ 695.00
ARRIFLEX II, 3 excellent lenses, 2 400' magazines, matchbox Deluxe case. $2800.00 value $1295.00
ARRIFLEX I, 3 fast lenses, 200' magazine, matchbox, sunshade etc. $1700 value ..... $ 675.00
CAMERAFLEX (Cineflex), 3 lenses—Apogar 35mm, 50mm and 75mm Bolters all f2.3, 24V motor; 2 200' magazines. Excellent ..... $ 495.00

CAMERAS 16mm

BOLEX SUPREME, Octameter, less lens ..... $ 195.00
AURICON PRO 200 Sound Camera w/3 lens turret, variable arm, galvo NR-24 Noise Reduction Amplifier, microphone, headphones, cables, carrying cases. Excellent $1295.00
MAURER Model 05 Camera, 3 lens turret, Model 06 Erect Image Viewfinder, 1-400' magazine, sun shade & matchbox, synchmotor, carrying case. $5600 value. Excellent $2250.00
Same as above but with 1200' magazine $2750.00
MITCHELL 16 w/3 Bolters, 400' magazine, 220V 3ph synchmotor, large finder. $6,000.00 value $3995.00
MAURER Modified 05 synchmotor, 400' magazine; 4 lens turret. A new low $1495.00
B&H FILMO 700A TURRET w/3 lenses; drum finder, objectives, trunk ..... $ 239.50
B&H FILMO SPECIALIST w/rackover, 400' magazine, synchmotor, Mitchell type viewfinder, positive finder, less lenses. $1800.00 value ..... $ 795.00

CAMERA ACCESSORIES

NEW DYALISCOPE ANAMORPHIS Lenses, bloc type 50mm, 75mm and 100mm. Set of three. $10,000.00 value $3995.00
NEW VISCOMATIC 3 SPEED FLUID TRIPOD heads for most 16mm cameras ..... $ 97.50
NEW VERSA DOLLY combination outfit—dolly or triangle with clamps—hihat—baby tripod. $201.00 value ..... $ 99.50
NEW Jr. type tripods with latest features ..... $ 119.50
HI-HATS for Jr. type tripods. New, regularly $22.00 ..... $ 16.95
H F Heavy Duty Commercial Type Car Top Platforms, holds 800 lbs. Includes 4'x5' non-skid top, removable ladder. $220.00 value ..... $ 149.50

ANIMATION & SPECIAL EFFECTS

B&H 35mm Animation Cameras; 400' magazine; massive. $3500.00 value $1795.00
Same with thru-lens focusing $2250.00
HOT PRESS with 4" type holder, 3 way switch. $400.00 value, like new ..... $ 295.00
Famous TEL ANIMA SCALE. Standard of Animation Industry. Regularly $2.50 ..... $ 1.25

LIGHTING EQUIPMENT

NEW 1000W R60 FLOODLITE lamp. Mog screw delivers 5000W with Colortran converter ..... $ 13.10
NORTHLITES 2000W Cone lens stand. $110 value ..... $ 79.50
RARDWELL-McALISTER 750W Baby Kags with stands ..... $ 57.50
B&M or MR 2000W Spots on stands. Excellent ..... $ 99.95
5KW KLIEGL and MR SENIOR spots on stands. Excellent ..... $ 179.50
EXTENSION & POWER CORDS, 25' w/half plug or box ..... $ 22.50

RECORDING & PLAYBACK

MAURER 16mm RECORDING OUTFITS—mixer, noise reduction amplification, voltage regulator, power supply, 400' magazine. Late Model E negative/positive, $10,500.00 value $5995.00
Early Model D negative only $2995.00
WESTREX 35mm Optical Recorders, outright purchase, good condition $3500.00
RCA Photophone 35mm Optical Recording Heads; 1000' magazine, less motor. No license required $2995.00
MR MIKE BOOM and 3 wheel tricycle type Perambulator ..... $ 895.00

CUTTING ROOM EQUIPMENT

MOVIOLA SOUND PREVIEW 35mm UDPVCS 8"x10" large picture. $2250.00 value, reconditioned $1495.00
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SOS Jr. 16mm ACTION VIEWERS, brilliant picture 2"x3¼". Reduced ..... $ 89.50

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HOUSTON 16mm PROCESSOR, neg./pos., stainless steel. $2500.00 value ..... $ 895.00
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Stineman 16/35mm DEVELOPING OUTFITS 200' in case with loading device. New surplus. $200 value ..... $ 96.95
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FILMO 70 DL 2 lenses, turret finder, excellent condition. $185.00. Mitchell viewfinder, variable mattes, new $250.00, used excellent condition $175.00. Reby Gearhead $450.00. Magazines, Mitchell 1000', new in factory packing, $100.00 each. B&H 1000' $50.00 each, B&H 400' $35.00 each. Motor, B&H Std. 110V AC-DC governor controlled, $85.00. Cash with order or COD. JACK WALTON, P.O. Box 1457, Tampa, Fla.

MAURER 16mm optical recorder, Model D, Serial RD 166, complete with recording head, amplifier, power supply, line transformer and carrying cases. Unit in beautiful condition. Sound reproduction is of finest quality. A real bargain. $2500.00. PAN AMERICAN FILMS, 735 Paydras St., New Orleans, La.

16MM MOVIOLA, Model ULX, Serial #1006, picture head and sound head. Good condition $895.00

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AURICON RECORDER Model RT 90 NRS Galvanometer. (Galvanometer alone cost over $500.) Adapted to 400' Bell & Howell magazine. One magazine included. Excellent condition 500.00

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16mm CINE SPECIAL Model I with lenses 400.00

AURICON PRO CAMERA, Model CM 71 Sound, 2—200 Foot Magazines, Noise Reduction Amplifier, HI FI Mike and Accessories. 1/ fl 9 E. K. Lens, Portable Power Supply Unit Pre Jr. Tripod, Carrying Case. Value $2133.00. Excellent 1275.00

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2 COLORTRAN Sr. kits, each $150.00; 1 Colortran Jr. kit, $110.00; 2 Colortran 2 lite boards, transformer, $90.00; MR 90 Hi Arc, $525.00; MR 40 duarc with pedestal $275.00, 220 volt, 3 phase interlock motor for Mitchell NC or BNC $375.00; same as above for Standard Mitchell. $250.00 new Esco 1/4 HP, 220 volt, 3 phase sync motors, $65.00; RCA P G-201 sound 16mm projector with 110 volt sync motor drive, $195.00; new Rue Seal 35mm recorders, less galvanometers, $2695.00, Simplex 40 star recorder or dubber with sync motor, pedestal, magazines, $695.00; as above with magnastripe head, $895.00; United Research 35mm re-recorder sync motor, magazines, pedestal, $295.00. BLUE SEAL SOUND DEVICES, P.O. BOX 472, New Canaan, Conn.

Continued on Next Page

Classified Ads

Continued From Preceding Page

STUDIO & PRODUCTION EQUIP.

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To Classified Advertisers

Copy deadline for classified advertising is the 1st of month preceding publication date Mail copy and remittance to cover cost o

AMERICAN CINEMATOGRAPHER
1782 No Orange Dr., Hollywood 28, Calif

QUESTIONS & ANSWERS

Continued from Page 472

Answer: To take a reading of a back-lighted subject with the Norwood meter, the meter should be used in the normal manner—that is, at the position of the subject, and with the heliosphere light-collector aimed at the camera lens.

As a back-light illuminates only a portion of the camera-side of the subject, it will illuminate the same percentage of the heliosphere, which represents the camera-side of the subject, and thus the meter will precisely indicate the correct exposure.—*Don Norwood, A S C Associate*

SIMULTANEOUS SWITCHING

Continued from Page 488

Faced with this problem on many assignments, I have devised a simple method for automatically eliminating distraction at the moment when I am most occupied with camera settings and an evasive subject.

Two methods have proven feasible, dependent on the make of camera and the application. My so-called "direct method" is to mount a momentary press switch, such as a micro-switch, on the camera in such a manner that the flexible contact arm of the switch is located in the field of movement of the camera filming button. When this is impractical, a hinged lever activates the micro-switch simultaneously with or just prior to depressing the camera release button, as shown at Fig. 6

The switching method described and illustrated here can be adapted to most of the motion picture cameras now being used by roving cameramen, TV newsreel photographers, etc. ■

"ODDS AGAINST TOMORROW"

Continued from Page 479

lished previously for this sequence. . so we would have to come back the following night to wind up the sequence if we didn't get it now. We made it, however, and when we announced "Print it!" dawn was breaking, and the task ended amid shouts of joy from the men. ■

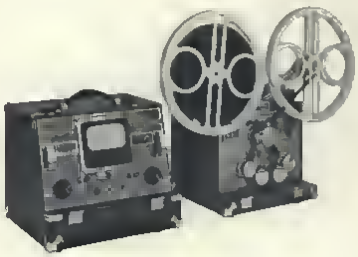
AROUND THE WORLD WITH MAGNASYNC

havana (Cuba)

Eldorado Pictures Corp of Cuba, with main studios in Havana, is completely equipped with Magnasync-Magnaphonic sound systems Photo at left, taken at the Biltmore Studio, Havana, shows the sound Supervisor, Charles Stapler, demonstrating recording techniques to Teresita, Cuban actress, Wm Stutz and D J White, Magnasync executives, Al Stetson, grip, Charles Maguire, production manager, and C. B. Newbery, producer of "Kiss Her Goodbye", the feature now in production

Inset photo shows Stapler and three barbudos' (the bearded ones) , part of the Biltmore Studio's armed guard which is still necessary in post-revolution Cuba.

Among the portable Magnasync equipments in use at Eldorado Pictures, the 17½ mm Type 1 is outstanding: its low power consumption, extreme portability, built-in footage counter and power amplifier, and plug-in audio make this 39 lb unit a popular selection for remote location production.



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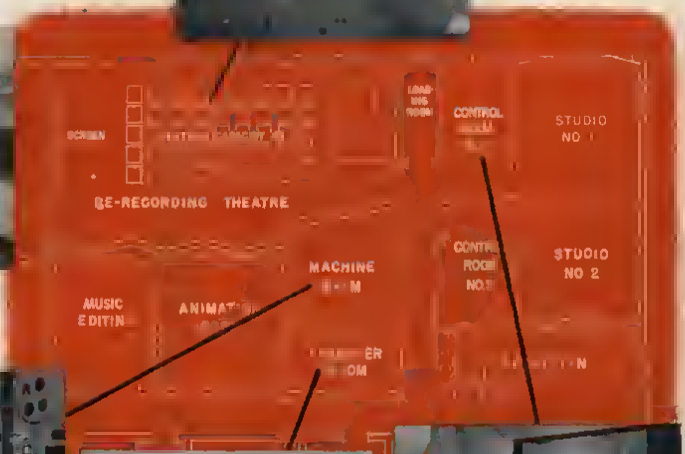

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